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CHARLES D. WALCOTT, DIRECTOR

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BIBLIOGRAPHY AND CATALOGUE

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Ray L. Moody
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1907

FOSSIL VERTEBRATA OF NORTH AMERICA

BY

OLIVER PERRY HAY



WASHINGTON
GOVERNMENT PRINTING OFFICE
1902

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Los Angeles Museum
of History, Science & Art
Exposition Park

CONTENTS.

	Page.
Letter of transmittal.....	7
Preface	9
Bibliography	13
Addendum	251
Tabular key to catalogue.....	252
Catalogue.....	262
Addenda et corrigenda.....	795
Index	797

LETTER OF TRANSMITTAL.

AMERICAN MUSEUM OF NATURAL HISTORY,
New York, May 6, 1901.

SIR: I have the honor to transmit herewith a Bibliography and Catalogue of the Fossil Vertebrata of North America.

I take pleasure in acknowledging the interest which you have shown at all times in the preparation of this work.

I am, with great respect, your obedient servant,

O. P. HAY.

Hon. C. D. WALCOTT,
Director of the U. S. Geological Survey,
Washington, D. C.

P R E F A C E .

The purpose of this bibliography and catalogue is to present a list of all the species of fossil vertebrates which have been described, up to the end of the year 1900, from all that part of the continent of North America lying north of Mexico, and to furnish a guide to the literature relating to all these extinct forms of organized beings. The number of species is so great and the literature describing them is so vast and so widely scattered that even the experts in the science of vertebrate paleontology have great difficulty in making and keeping themselves fully informed as to what has already been done and what is being done. It is hoped that this work will relieve students of much tedious and often unavailing search.

This bulletin may be said to consist of three parts: First, a bibliography which contains the titles of all the books, memoirs, and papers, extended or brief, which the author has been able to consult and which have appeared to him to have a useful bearing on the subject; second, a systematically arranged list of all the species of fossil vertebrates which have been described from the region above indicated; third, an index, alphabetically arranged, of all the systematic names occurring in the volume.

In the bibliography there are given about 4,600 titles. Accompanying each is a statement of the number of pages occupied by the work and the number of plates or figures. If the memoir or paper is found in some serial publication, the name of this is given together with the volume and pages. All of the titles have been obtained through actual examination of the scientific journals. In the case of many of these the search has been made page by page, since the indexes are so often deficient that they can not be wholly relied on. The end in view throughout has been to find all that the paleontologist will need in his work and to give correct citations.

The titles of works and papers are given under the names of the authors, and these authors' names are presented in alphabetical order. Each author's papers are arranged in the sequence of the years of publication. Each title is preceded by the author's name, the year of publication, and a letter of the alphabet, A, B, C, etc., according to the number of papers published during that year, as "Leidy, J., 1868 A," "1868 B" to "1868 J." If an author has issued more than 26

papers in any year, the additional papers are indicated by the letters AA, BB, etc. Thus we have "Cope, E. D., 1884 JJ." It must be understood that it is not here implied that the papers of any author in any year have been issued in the order in which they follow each other in this bibliography. In the case of an author who, like Professor Cope, was publishing numerous memoirs, papers, and notes in many journals and Government publications, it is manifestly almost impossible to ascertain the exact order of issue. If any student should be under the necessity of determining such order, he will have to address himself to the task.

How successful the writer has been in collecting a complete list of species only practical use of the book will prove. What has been spoken of above as a list of the known species is, however, far more, for under each species each genus and each group of higher rank represented by any North American fossil species there has been included references to the literature appertaining to it—that is, to put it in another way, each paper and memoir and book cited in the bibliographical portion has been examined, and the proper citations of it have been recorded under the species, genera, etc., of the catalogue of species. An estimate has shown that there are over 40,000 citations recorded. Nevertheless, it is not improbable that some important things have escaped attention.

In the catalogue the writer has not usually cited directly the place of publication of authors' papers, but has referred to them as notated in the bibliography. If, to give an illustration, the student finds under *Ceratops* the citation, "Marsh, O. C., 1888 C, p. 477," he must turn to the list of Professor Marsh's papers for the year 1888 and run down the list to the letter C. He will find there the complete title of that paper, place of publication, etc. This method of citation has been adopted for the following reasons: (1) To economize labor in the preparation of this book. The writer does not feel that it could ever have been completed had he been compelled to cite the journal and volume according to the usual method for all of the approximately 40,000 references herein contained. (2) To bring the size of this bulletin within limits convenient for use. To refer to papers in the usual way, even with intelligible abbreviations, would have increased the size of this volume probably 50 per cent or more. (3) Because the writer believes that, on the whole, the method here employed will save the time of the student. If the place of publication alone is given, no clue whatever is afforded to the nature of the paper. It may or may not contain something of value to him. In this bulletin he has the complete title. If he is studying the dentition of a fossil vertebrate, and the paper which he finds cited deals with the vertebræ, or the carpus, or the habits of the animal in question, he needs to go no further. The time saved in making one trip to a

library will compensate for any trouble undergone in turning from the catalogue to the bibliography. This method of reference, with some modifications, is in frequent use by scientific writers, though it has probably not been employed before on so large a scale.

Some further explanation may be made regarding the systematic portion of this work. Under each genus and species there will be found, first of all, a reference to the original description. This is followed by the other citations, arranged according to authors in alphabetic order, years of publication, and symbols. If the author cited has employed a generic or specific name different from the one adopted, this is thrown in parenthetically after the citation.

The writer has arranged the classes, orders, families, and genera of our fossil vertebrates according to what has seemed to him to be their natural relationships. This has appeared to him to be preferable to arranging them all alphabetically, although he does not overlook the advantages of the latter method. On the other hand, the species of each genus is here disposed in alphabetical order for the reason that it will save much time in finding them, while attempts at giving them a natural arrangement are often futile.

As regards nomenclature the writer has followed the rules of the American Ornithological Union, because he believes that they meet the requirements of systematic work more completely and consistently than those adopted by any other body of zoologists.

The coming years will surely witness a great increase in our knowledge of the beings which in past ages have peopled our continent. As a result of discoveries and investigations many new forms will be described, while again perhaps many genera and species which are now accepted will be reduced to synonymy. This will, before many years, make obsolete many of the names here adopted, but it is the purpose of this work to facilitate just such discoveries and investigations and changes.

The writer takes pleasure in expressing his obligations to many friends for assistance and encouragement in prosecuting his work on this volume. Encouragement has been afforded by all, or nearly all, of the vertebrate paleontologists of the United States, and as many as have been applied to have given the information desired. Financial assistance has been given by the Smithsonian Institution, and for this acknowledgments are due, especially to its officers, Secretary S. P. Langley and Assistant Secretary Richard Rathbun; and to Hon. C. D. Walcott, director of the United States Geological Survey. Acknowledgments are due to Dr. Theodore Gill for advice with regard to matters pertaining to nomenclature, to scientific literature, and to classification. It must not, however, be inferred that he is responsible for any innovations that have been made. Dr. Leonhard Stejneger, curator of the department of reptiles, United States National Museum, has

answered many questions with regard to nomenclature and has given assistance in other ways. The classification of the birds here adopted is, with slight modification, that proposed by him in the *Standard Natural History*, 1885. Prof. Frederick A. Lucas, assistant curator of the department of comparative anatomy, United States National Museum, has been helpful in many ways, and to him is due the final disposition of certain of the genera and species.

AMERICAN MUSEUM OF NATURAL HISTORY,

New York, May 1, 1901.

BIBLIOGRAPHY AND CATALOGUE OF THE FOSSIL VERTEBRATA OF NORTH AMERICA.

By OLIVER PERRY HAY.

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Concluding report on the Maltese fossil elephants.
Report Brit. Assoc. Adv. Sci., 43d meeting, Bradford, 1873, pp. 185-187.</p> <hr/> <p>1875 A
On a fossil saurian vertebra (<i>Arctosaurus osborni</i>), from the arctic regions.
Proc. Roy. Irish Acad. (2), ii, pp. 177-179, with 4 text figs.</p> <hr/> <p>1877 A
A fossil saurian from the arctic regions.
Amer. Jour. Sci. (3), xiii, p. 316.
Describes <i>Arctosaurus osborni</i> Adams.</p> <hr/> <p>1877 B
Monograph of the British fossil elephants. Part I. Dentition and osteology of <i>Elephas antiquus</i>.
Palaeontographical Society, xxxi, pp. 1-68; pls. i-v.</p> <hr/> <p>1879 A
Monograph of the British fossil elephants. Part II. Dentition and osteology of <i>Elephas primigenius</i> (Blumenbach).
Palaeontographical Society, xxxiii, pp. 69-146; pls. vi-xv.</p> <hr/> <p>1881 A
Monograph of the British fossil elephants. Part III. Osteology of <i>E. primigenius</i> and dentition and osteology of <i>E. meridionalis</i>.
Palaeontographical Society, xxxv, pp. 147-265; pls. xvi-xxviii.</p> | <p>Adams, C. B. 1846 A
Notice of a small Ornithichnite.
Amer. Jour. Sci. (2), ii, pp. 215-216, with 2 figs.</p> <p>Adams, George I. 1895 A
Two new species of <i>Dimictis</i> from the White River beds.
Amer. Naturalist, xxix, pp. 573-578; pl. xxvi and 1 text fig.
Descriptions of <i>Dimictis fortis</i> and <i>D. bombifrons</i>.</p> <hr/> <p>1896 A
The extinct <i>Felidæ</i> of North America.
Amer. Jour. Sci. (4), i, pp. 419-444, with pls. x-xii.</p> <hr/> <p>1896 B
On the species of <i>Hoplophoneus</i>.
Amer. Naturalist, xxx, pp. 46-51; pls. i, ii.
Describes new species <i>H. insolens</i> and <i>H. robustus</i>.</p> <hr/> <p>1897 A
On the extinct <i>Felidæ</i>.
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Jenaische Zeitschr. Naturwiss., xxxii, pp. 347-410, with pls. xii-xvi and 4 figs. in the text.</p> <p>Agassiz, Louis. 1835 A
On the fossil fishes of Scotland.
Report Brit. Assoc. Adv. Sci., 4th meeting, Edinburgh, 1834, pp. 646-647.
Description of new genus <i>Megalichthys</i>, type <i>M. hibberti</i>.</p> <hr/> <p>1841 A
[Note on fossil jaw, on which is based the genus <i>Phocodon</i>, type <i>P. scillæ</i> Ag.]
Valentin's Repertorium f. Anat. Physiol., vi, p. 236.</p> |
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Agassiz, Louis—Continued. 1843 A
Report on the fossil fishes of the
Devonian system or Old Red sandstone.
Report Brit. Assoc. Adv. Sci., 12th meeting,
Manchester, 1842, pp. 80-88.

1843 B
Recherches sur les poissons fossiles.
Tome i: pp. i-xxxii; 1-188; atlas of 11 pls.
(A-K.)

Tome ii: pp. i-xii; pt. 1, 1-310; pt. 2, 1-144;
atlas of 146 pls.

Tome iii: pp. i-viii; 1-390; 1-32; atlas of 83 pls.

Tome iv: pp. i-xvi; 1-292; 1-22; atlas of 61 pls.

Tome v: pp. i-xii; 1-160; 1-144; atlas of 95 pls.

This work was issued in livraisons at various
times from 1833 to 1844. The dates of publica-
tion of the livraisons and of the plates are
given in Woodward and Sherborn's Catalogue
of British Fossil Vertebrates, pp. xxv-xxix.

Under the genera and species of the present
work the actual date of publication, if not 1843,
is generally given in parentheses after "1843 B."

1844 A
Synoptical table of British fossil
fishes, arranged in the order of the
geological formations.

Report Brit. Assoc. Adv. Sci., 13th meeting,
Cork, 1843, pp. 194-207.

1844 B
*Monographie des poissons fossiles du
vieux grès rouge ou système Dévonien
(Old Red sandstone) des Isles Britanniques
et de Russie.*

Pp. i-xxxvi; 1-171, with pls. A-I; i-xxxiii,
Neuchâtel (Suisse).

1845 A
Report on the fossil fishes of the
London clay.

Report Brit. Assoc. Adv. Sci., 14th meeting,
York, 1844, pp. 279-310.

1846 A
On the ichthyological fossil fauna of
the Old Red sandstone.

Edinb. New Philos. Jour., xli, pp. 17-49.
From *Monographie des poissons foss. du
vieux grès rouge.*

1848 A
[Letter to Dr. Gibbes regarding
Dorudon.]

Proc. Acad. Nat. Sci. Phila., iv, p. 4.

1849 A
[Remarks on crocodiles of the Green
sand of New Jersey and on *Atlantochelys.*]

Proc. Acad. Nat. Sci. Phila., iv, p. 169.

Contains no descriptions.

Agassiz, Louis—Continued. 1850 A
On the fossil remains of an elephant
found in Vermont.

Proc. Amer. Assoc. Adv. Sci., 2d meeting,
Cambridge, Mass., pp. 100-101.

Said by Professor Agassiz to be found for
the first time in this country.

1850 B
Remarks on finding femur of *Atlantochelys.*

Proc. Nat. Hist. Soc. Boston, iii, p. 351.

No adequate description and no specific
name.

1851 A
[Announcement of the finding of the
head of a walrus on New Jersey shore.]
Proc. Amer. Assoc. Adv. Sci., 4th meeting,
New Haven, 1850, p. 252.

1851 B
Report on the vertebrate fossils ex-
hibited to the Association (abstract).
Proc. Amer. Assoc. Adv. Sci., 5th meeting,
Washington, D. C., 1851, pp. 178-180.

1853 A
Notice of Joseph Leidy's "Mémor
of the extinct species of American ox."
Amer. Jour. Sci. (2), xvi, p. 281.

1856 A
Notice of the fossil fishes found in
California by W. P. Blake.
Amer. Jour. Sci. (2), xxi, pp. 272-275.
Describes 11 new species of Elasmobranchs.
The same species were described and figured
in Pacific Survey Report, v, pp. 313-316, pl. i.

1857 A
Notice of the fossil fishes.
Pacific Survey Report, v, pp. 313-316, with
pl. 1.

Contains descriptions and figures of 11 new
species of Elasmobranchs.

1857 B
Contributions to the natural history
of the United States of America. Vol.
i, pt. ii, North American *Testudinata.*

Pp. 235-452d, with pls. i-xxvii.
The plates are found in vol. ii. This vol-
ume is devoted mostly to the embryology of
the *Testudinata.*

1862 A
Highly interesting discovery of new
sauroid remains.
Amer. Jour. Sci. (2), xxxiii, p. 138.
Refers to the discovery of *Eosaurus* by O. C.
Marsh; no name yet proposed.

- Agassiz, Louis**—Continued. 1862 B
Mastodon tooth in Amador County, Cal.
Amer. Jour. Sci. (2), xxxiv, p. 135.
Editorial note supposed to have been written by Agassiz.
- 1862 C
Remarks on the megatheroids.
Proc. Nat. Hist. Soc. Boston, ix, pp. 101-102.
- 1863 A
Note on the megatherium.
Amer. Jour. Sci. (2), xxxvi, p. 300.
- 1863 B
[Remarks on *Megatherium*.]
Proc. Nat. Hist. Soc. Boston, ix, p. 193.
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Abhandl. Naturwiss. Verein Hamburg, xiv, pp. 7-134, with 54 figs. in the text.
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Ueber den Stammbaum der Raubthiere.
Schriften d. phys.-ökon. Gesellsch. Königsberg, xx, Bericht, pp. 22-23.
Presents an arrangement of the families of the *Carnivora*.
- 1886 A
Über die cetoide Natur der *Promammalia*.
Anatomischer Anzeiger, i, pp. 338-350.
- Alessandri, G. De.** 1896 A
Avanzi di *Oxyrhina hastalis* del miocene di Alba.
Atti Soc. Ital. Sci. Nat., Milano, xxxvi, pp. 263-269, with pl. i.
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Étude anatomique du cobaye (*Cavia cobaya*).
Jour. l'Anat., Physiol. norm. et patholog., xxxiv, pp. 735-756, with 5 text figs.
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Étude anatomique du cobaye (*Cavia cobaya*).
Jour. l'Anat. Physiol., norm. et patholog., xxxv, pp. 333-381.
- Allen, Harrison.** 1880 A
On some homologies in bunodont dentition.
Proc. Acad. Nat. Sci., Phila., pp. 226-228.
- 1882 A
On a revision of the ethmoid bone in the *Mammalia*, with special reference to the description of this bone and of the sense of smelling in the *Cheiroptera*.
Bull. Mus. Comp. Zool., x, pp. 135-164, with pls. i-vii.
- Allen, Harrison**—Continued. 1886 A
On the tarsus of bats.
Amer. Naturalist, vol. xx, pp. 175-176, with 6 illus.
- 1886 B
On the types of tooth structure in *Mammalia*.
Amer. Naturalist, xx, pp. 295-297.
- 1888 A
The occipito-temporal region in the crania of *Carnivora*.
Science, xi, p. 71.
- 1889 A
Remarks on the pronghorn (*Antilocapra americana*).
Proc. Amer. Philos. Soc., xxvi, pp. 366-367.
- 1891 A
Prof. Joseph Leidy: His labors in the field of vertebrate anatomy.
Science, xviii, pp. 274-276.
- 1893 A
A monograph of the bats of North America.
Bull. U. S. Nat. Mus. No. 43, pp. 198, 38 pls. Washington, D. C., 1893.
- Allen, Joel Asaph.** 1876 A
Description of some remains of an extinct species of wolf, and an extinct species of deer from the lead region of the Upper Mississippi.
Amer. Jour. Sci. (3), xi, pp. 47-51.
- 1876 B
The American bisons, living and extinct.
Mem. Kentucky Geol. Surv., i pt. ii, pp. i-ix; 1-246, with pls. i-xii.
Mem. Mus. Comp. Zool., iv, No. 10, pp. i-ix; 1-246, with pls. i-xii and map.
- 1876 C
Geographical variation among North American mammals, especially with respect to size.
Bull. U. S. Geol. and Geog. Surv. Terr., ii, pp. 309-344.
- 1877 A
Monographs of North American *Rodentia*.
Report U. S. Geol. Surv. Terr., F. V. Hayden, U. S. geologist in charge, vol. xi.
No. ii, *Leporidae*, pp. 265-378; No. iii, *Hystriidae*, pp. 379-398; No. iv, *Lagomyidae*, pp. 399-414; No. v, *Castoroididae*, pp. 415-426; No. vi, *Castoridae*, pp. 427-454; No. xi, *Sciuridae*, pp. 631-940.

Allen, Joel Asaph—Continued. 1877 B
Synoptical list of the extinct *Rodentia*
of North America.

Report U. S. Geol. Surv. Terr., F. V. Hayden,
U. S. geologist in charge, vol. xi, pp. 943-949.

This list forms a portion of the volume
containing J. A. Allen's and E. Coues's mon-
ographs of N. A. *Rodentia*.

In this list most of the species are mentioned
without comment.

1878 A

Description of a fossil passerine bird
from the insect-bearing shales of Colo-
rado.

Bull. U. S. Geol. and Geog. Surv. Terr., 1878
iv, pp. 443-445, with pl. i.

See also *Nature*, vol. xviii, pp. 204-205;
Amer. Jour. Sci., 1878, xv, p. 381.

Describes *Palæospiza bella*.

1879 A

On the species of the genus *Bassaris*.

Bull. U. S. Geol. and Geog. Surv. Terr., v, pp.
331-340.

Presents the synonymy and the literature
bearing on this genus and its species.

1880 A

History of North American Pinni-
peds; a monograph of the walruses,
sea lions, sea bears, and seals of North
America.

Pp. i-v; 1-785, with 60 figs. in the text.
Washington, 1880.

1881 A

Preliminary list of works and papers
relating to the mammalian orders *Cete*
and *Sirenia*.

Bull. U. S. Geol. and Geog. Surv. Terr., vi,
pp. 399-562.

1885 A

On an extinct type of dog from Ely
Cave, Lee County, Virginia.

Mem. Mus. Comp. Zool., x, No. 2, pp. 1-8, with
pls. i-iii.

Describes *Pachycyon robustus*, Allen. This
paper is followed (pp. 8-13) by one by N. S.
Shaler on the age of the cave.

1887 A

Note on Squalodont remains from
Charleston, S. C.

Bull. Amer. Mus. Nat. Hist., ii, pp. 35-39,
with pls. v, vi.

Describes *Squalodon tiedemani*, sp. nov.

1893 A

Descriptions of four new species of
Thomomys, with remarks on other spe-
cies of the genus.

Bull. Amer. Mus. Nat. Hist., v, pp. 47-68,
with pl. i.

Allen, Joel Asaph—Continued. 1900 A
The North American jumping mice.
Amer. Naturalist, xxxiv, pp. 199-202.

Allen, John H. 1846 A
Some facts respecting the geology of
Tampa Bay.

Amer. Jour. Sci. (2), i, pp. 38-42.

Allis, Edward P. 1889 A
The anatomy and development of
the lateral line system in *Amia calva*.

Jour. Morphology, ii, pp. 463-540, with pls.
xxx-xlii.

1899 A

On certain homologies of the squa-
mosal, intercalar, exoccipital, and ex-
trascapular bones of *Amia calva*.

Anatom. Anzeiger, xvi, pp. 49-72.

Appended is a list of 36 papers bearing on
the subject.

1899 B

A reply to certain of Cole's criticisms
of my work on *Amia calva*.

Anatom. Anzeiger, xv, pp. 364-379.

1900 A

The premaxillary and maxillary
bones and the maxillary and mandib-
ular breathing valves of *Polypterus bi-*
chir.

Anatom. Anzeiger, xviii, pp. 257-289, with 3
figs. in the text.

Alston, Edward R. 1876 A
On the classification of the order
Glires.

Proc. Zool. Soc., Lond., 1876, pp. 61-98, with
pl. iv and 5 figs. in the text.

Alth, Alois v. 1874 A
Ueber die palæozoischen Gebilde
Podoliens und deren Versteinerungen.

Abhandl. k. k. geolog. Reichsanstalt, Wien,
vii, pp. 1-77, pls. i-iv.

Cephalaspis, *Pteraspis*, *Cyathaspis*, and *Coc-*
costeus.

1886 A

Ueber die Zusammengehörigkeit der
den Fischgattungen *Pteraspis*, *Cya-*
thaspis, und *Scaphaspis* zugeschriebenen
Schilder.

Beiträge zur Paläont. Österreich-Ungarns
und des Orients, v. Heft. iii, pp. 61-73, with pl.
xxiv.

Ameghino, Florentino. 1883 A

Sobre la necesidad de borrar el gé-
nero *Schistopleurum* y sobre la clasifica-
cion y sinonimia de los Glyptodontes
en general.

Bol. Acad. Nac. Ciencias, Córdoba, Argen-
tina, v, pp. 1-34.

Ameghino, Florentino—Cont'd. 1886 A
Contribuciones al conocimiento de
los mamíferos fósiles de los terrenos
terciarios antiguos del Paraná.

Bol. Acad. Nac. Ciencias, Córdoba, Argentina, ix, pp. 1-228.

1889 A

Contribucion al conocimiento de los
mamíferos fósiles de la República
Argentina, obra escrita bajo los aus-
picios de la Academia Nacional de
Ciencias de la República Argentina
para presentarla á la Exposicion Uni-
versal de Paris de 1889.

Buenos Aires, 1889. Folio, pp. i-xxxiii; 1-1027, with atlas of pls. i-xviii.

1891 A

Observaciones criticas sobre los
caballos fósiles de la República Argen-
tina.

Revista Argentina de Historia Natural, i,
pp. 4-17; 65-88.

1891 B

Los Plagiaulacédeos argentinos y sus
relaciones zoológicas, geológicas y geo-
gráficas.

Revista Argentina de Historia Natural, i,
pp. 33-44.

1891 C

Adicion á la memoria del Dr. H. von
Ihering sobre la distribucion geográfica
de los Creodontes.

Revista Argentina de Historia Natural, i,
pp. 214-219.

1891 D

Determinacion de algunos jalones
para la restauracion de las antiguas co-
nexiones del continente Sud-americano.

Revista Argentina de Historia Natural, i,
pp. 282-288.

1892 A

Répliques aux critiques du Dr. Bur-
meister sur quelques genres de mam-
mifères fossiles de la République
Argentine.

Bol. Acad. Nac. Ciencias, Córdoba, xii, pp.
437-469; also as separate with pp. 3-35.

1894 A

Enumération synoptique des espèces
mammifères fossiles des formations
éocènes de Patagonie.

Bol. Acad. Nac. Ciencias, Córdoba, xiii, pp.
259-452, with 66 figs. in the text.

Bull. 179—2

Ameghino, Florentino—Cont'd. 1896 A
Sur l'évolution des dents des mammi-
fères.

Bol. Acad. Nac. Ciencias, Córdoba, Argen-
tina, xiv, pp. 381-517.

1897 A

Mammifères crétacés de l'Argentine.
Deuxième contribution à la connais-
sance de la faune mammalogique des
couches à *Pyrotherium*.

Bol. Institut Geogr. Argentino, xviii, pp.
1-117, with 86 figs. in the text.

Many new genera and species described.
Contains brief references to papers by Prof. O. C.
Marsh and Dr. J. L. Wortman on the *Tenio-
dontia*. Reviewed by M. Schlosser in Neues
Jahrh. Min., 1900, ii, pp. 296-306.

1898 A

An existing ground-sloth in Patago-
nia.

Natural Science, xiii, pp. 324-326.

A translation of the original paper, which
was published in La Plata, Argentina, 1898.

1898 B

Sur l'évolution des dents des mammi-
fères.

Bull. Soc. Géol. France (3), xxvi, pp. 497-
499

1899 A

On the primitive type of the plexo-
dont molars of mammals.

Proc. Zool. Soc. Lond., 1899, pp. 555-571,
with 16 figs. in the text.

— See also **Gervais and Ameghino.**

American Geologist.

1888 A

[Editorial notice of a paper by Dr.
Traquair on fossil fishes printed in
Geological Magazine for May, 1888.]

Amer. Geologist, ii, p. 133.

1891 A

New discoveries by Dr. Clarke in the
fish beds of the Devonian.

Amer. Geologist, vii, pp. 143-144.

From reports of meeting of Amer. Assoc.
Adv. Sci.

1891 B

The oldest fish remains known.

Amer. Geologist, vii, pp. 329-330.

Editorial comment on discoveries in Colo-
rado by C. D. Walcott.

1891 C

Discovery of mastodon remains in
the Shenandoah Valley.

Amer. Geologist, vii, p. 335.

Editorial note regarding finding of bones
of the mastodon in Rockingham County, Va.

American Geologist—Cont'd. 1891 D
[Editorial comment on Dr. G. Baur's
"Remarks on the reptiles generally
called *Dinosauria*," published in Amer.
Naturalist, xxv, pp. 434-454.]
Amer. Geologist, viii, pp. 55-56.

Supposed Trenton fossil fish.

Amer. Geologist, viii, pp. 178-180.
Editorial comment on C. D. Walcott's Lower
Silurian fishes.

Man and the mammoth.

Amer. Geologist, viii, pp. 180-188.
Editorial comment on paper by M. Max.
Lohest presented before the International Geo-
logical Congress at Belgium.

"Personal and scientific news."

Amer. Geologist, viii, pp. 191, 198.
Notes on the finding of various vertebrates
in Florida by Dr. J. Kost, and of *Megalonyx* in
Tennessee by Professor Safford.

Prehistoric horses.

Amer. Geologist, ix, pp. 67-68.
Editorial comment on Professor Cope's paper
in Amer. Naturalist for October, 1891.

American Journal of Science. 1828 A
Teeth of the mastodon.

Amer. Jour. Sci. (1), xiv, pp. 187-188.
A notice, taken from the New York Times,
regarding the finding of teeth of mastodon at
Sharon, Conn.

Vertebral bone of a mastodon.

Amer. Jour. Sci., xxvii, pp. 165-166.
Found in Connecticut.

Large skeleton of the *Zeuglodon* of
Alabama.

Amer. Jour. Sci., xlix, p. 218.
Extract from Mobile Daily Advertiser of
May 23, 1845. Refers to skeleton found by Dr.
Koch.

Fossil footmarks found in strata of
the Carboniferous series in Westmore-
land County, Pa.

Amer. Jour. Sci., xlviii, pp. 217-218.

Remarks [on paper by A. T. King].

Amer. Jour. Sci., xlviii, p. 343,
See King, A. T. 1845 A.

The mastodon of Newburgh, N. Y.,
discovered in August, 1845.

Amer. Jour. Sci. (2), i, pp. 268-270.

American Journal of Science—Con-
tinued. 1846 B

Mastodon giganteus.

Amer. Jour. Sci. (2), ii, pp. 131-133, with
1 fig. in text.

An unsigned editorial.

Harlanus, a new genus of fossil pachy-
derms.

Amer. Jour. Sci. (2), iii, p. 125.

Editorial note on paper by R. Owen, in Proc.
Acad. Phila., iii, pp. 93-96. 1846. (Owen, R.
1846 A.)

Ornithichnites.

Amer. Jour. Sci. (2), iii, p. 276.

The *Mastodon giganteus* of North
America, by John C. Warren, M. D.

Amer. Jour. Sci. (2), xiv, p. 454.

An editorial notice of Dr. Warren's book.

On a fossil saurian of the New Red
sandstone formation of Pennsylvania,
with some account of that formation,
etc., by Isaac Lea.

Amer. Jour. Sci. (2), xiv, p. 451.

Editorial notice of Lea's paper in Jour.
Acad. Nat. Sci. Phila. (2), ii, pt. 3.

Notice of the "*Mastodon giganteus*" of
Dr. J. C. Warren.

Amer. Jour. Sci., xv, pp. 367-373.

An editorial notice of Dr. Warren's work on
the mastodon.

Fossil elephant.

Amer. Jour. Sci. (2), xv, p. 146.

Editorial note on occurrence of fossil ele-
phant at Zanesville, Ohio.

Notice of Cope's "Synopsis of the
extinct *Batrachia* and *Reptilia* of North
America."

Amer. Jour. Sci. (3), i, pp. 220-221.

On two new Ornithosaurians from
Kansas, by Edward D. Cope.

Amer. Jour. Sci. (3), iii, pp. 374-375.

Editorial notice of Cope's paper with above
title, in Amer. Phil. Soc., xii, p. 420.

[Editorial remarks on Professor
Cope's "Note on the Cretaceous of
Wyoming," said to be published in
Proc. Phil. Soc. Phila.]

Amer. Jour. Sci. (3), v, p. 231.

- American Journal of Science**—Continued. 1875 A
A new mastodon.
Amer. Jour. Sci. (3), ix, p. 222.
Editorial notice of announcement by Professor Cope.
- 1876 A
Fifth annual report of the Geological Survey of Indiana, made during the year 1873.
Amer. Jour. Sci. (5), xii, p. 307.
Editorial notice.
- 1882 A
Mastodons in New Jersey.
Amer. Jour. Sci. (3), xxiv, pp. 294-295.
Editorial notice of paper by Professor Lockwood.
- American Naturalist.** 1869 A
The egg of the great auk.
Amer. Naturalist, iii, p. 550.
A note without signature.
- 1871 A
Fossil whale in the Drift.
Amer. Naturalist, v, p. 125.
Extract from Nature.
- 1871 B
Fossil walrus.
Amer. Naturalist, v, p. 316.
Notice of exhibition of skull of walrus by Professor Newberry.
- Ami, Henry M.** 1891 A
On some extinct *Vertebrata* from the Miocene rocks of the north-west territories of Canada recently described by Professor Cope.
Science, xviii, p. 53.
See also Ottawa Naturalist, v, pp. 74-77, for abstract.
- 1898 A
The mastodon in western Ohio.
Science (n. s.), vii, p. 80.
- Ammon, Ludwig v.** 1885 A
Ueber *Homeosaurus maximiliani*.
Abhandl. math.-phys. Classe k. bayerischen Akad. Wissensch., xv, pp. 499-528, with pls. i, ii.
- 1896 A
Ueber neue Stücke von *Ischyodus*.
Berichte naturw. Vereins Regensburg, 1894-95, Heft v, pp. 252-263, with pls. v, vi.
- Anderson, John.** 1860 A
On Dura Den sandstone.
Report Brit. Assoc. Adv. Sci., 29th meeting, Aberdeen, 1859, p. 97.
- 1861 A
Report on the excavations in Dura Den.
Report Brit. Assoc. Adv. Sci., 30th meeting, 1860, pp. 32-34.
Treats of *Holoptychius*, etc.
- Andreæ, A.** 1893 A
Acrosaurus frischmanni H. v. Meyer.
Ein dem Wasserleben angepasster Rhynchocephale von Solenhofen.
Bericht Senckenb. naturforsch. Gesellsch., 1893, pp. 21-34, with pls. i, ii.
- 1893 B
Vorläufige Mittheilung über die Ganoiden (*Lepidosteus* und *Amia*) des Mainzer Beckens.
Verhandl. naturhist.-medicin. Vereins Heidelberg, (n. s.), v, pp. 7-15, with 2 text figs.
Contains remarks on North American genera *Lepidosteus*, *Claesius*, *Amia*, *Pappichthys*.
- Andrews, Charles W.** 1895 A
Note on a specimen of *Keraterpeton galvani* Huxley, from Staffordshire.
Geol. Mag. London (4), ii, pp. 81-84, with 1 text fig.
- 1895 B
Note on a skeleton of a young plesiosaur from the Oxford clay of Peterborough.
Geol. Mag. London (4), ii, pp. 241-243, with pl. ix and 1 text fig.
- 1895 C
On the development of the shoulder-girdle of a plesiosaur (*Cryptoclidus oxoniensis*, Phillips sp.), from the Oxford clay.
Ann. and Mag. Nat. Hist. (6), xv, pp. 333-346, with 4 woodcuts in the text.
- 1895 D
On the structure of the skull in *Peloneustes phalarchus*, a plesiosaur from the Oxford clay.
Ann. and Mag. Nat. Hist. (6), xvi, pp. 242-256, with pl. xiii and 3 figs. in the text.
- 1895 E
The pectoral and pelvic girdles of *Muraenosaurus plicatus*.
Ann. and Mag. Nat. Hist. (6), xvi, pp. 429-434, with 3 figs. in the text.
- 1896 A
On the structure of the plesiosaurian skull.
Quart. Jour. Geol. Soc., lii, pp. 246-252, with pl. ix and 2 figs. in the text.
- 1897 A
Note on the cast of the brain cavity of *Iguanodon*.
Ann. and Mag. Nat. Hist. (6), xix, pp. 585-591, with pl. xvi and 1 text fig.
- Andrews, Edmund.** 1875 A
Dr. Koch and the Missouri mastodon.
Amer. Jour. Sci. (3), x, pp. 32-34.

- Annan, Robert.** 1793 A
Account of a large animal found near Hudson River.
Memoirs Amer. Acad. Arts and Sci. (1), ii, pp. 160-164.
Describes what appears to have been the skeleton of a mastodon.
- Anonymous.** 1834 A
Teeth of the elephant and mastodon.
Amer. Jour. Sci., xxv, pp. 257-258.
Found in Ohio.
- 1837 A
Fossil remains of the elephant, *Elephas primigenius*.
Amer. Jour. Sci., xxxii, pp. 377-379.
- Atthey, Thomas.** 1868 A
Notes on various species of *Ctenodus*, obtained from the shales of the Northumberland coal field.
Ann. and Mag. Nat. Hist. (4), vol. i, pp. 77-87.
Also in Nat. Hist. Trans. Northumberland and Durham, iii, 1868, pp. 54-66, pls. i-iii. Here the paper is credited to Hancock and Atthey.
- 1868 B
On the occurrence of palatal teeth belonging to the genus *Climacodus* M'Coy in the Low Main shale of Newsham.
Ann. and Mag. Nat. Hist. (4), ii, pp. 321-323.
Also in Nat. Hist. Trans. Northumberland and Durham, iii, 1868, pp. 306-309.
- 1875 A
On the articular bone and supposed vomerine teeth of *Ctenodus obliquus*, and on *Palæoniscus hancocki*, n. sp., from the Low Main, Newsham, Northumberland.
Ann. and Mag. Nat. Hist. (4), vol. xv, pp. 309-312, pl. xix.
- 1876 A
On *Anthracosaurus russelli* (Huxley).
Ann. and Mag. Nat. Hist. (4), xviii, pp. 146-167, with pls. viii-xi.
- 1877 A
Notes on a paper by R. H. Traquair, M. D., F. G. S., F. R. S., on the structure of the lower jaw in *Rhizodopsis* and *Rhizodus*.
Ann. and Mag. Nat. Hist. (4), vol. xx, pp. 129-130.
See reply to this on p. 244, same volume.
— See also **Hancock** and **Atthey**.
- Atwater, Caleb.** 1820 A
On some ancient human bones, etc., with a notice of the bones of the mastodon or mammoth, and of various shells found in Ohio and the West.
Amer. Jour. Sci. (1), ii, pp. 242-246, with pl. ii.
- Auld, Robert C.** 1892 A
As to the "extinction" of the American horse.
Science, xx, p. 135.
- Ayres, Howard.** 1893 A
On the genera of the *Dipnoi dipneumones*.
Amer. Naturalist, xxvii, pp. 919-932.
- Baer, K. E. von.** 1840 A
Untersuchungen über die ehemalige Verbreitung und gänzliche Vertilgung der von Steller beobachteten nordischen Seekuh (*Rytina*, Ill.).
Mém. Acad. Imp. Sci., St.-Petersbourg (6), Sci. Nat., iii., pp. 53-80.
- 1866 A
Neue Auffindung eines vollständigen Mammuths mit der Haut und den Weichtheilen, im Eisboden Sibiriens, in der Nähe der Bucht des Tas.
Mélanges biolog. Bull. Acad. Imp. Sci. St. Pétersb., v, pp. 644-740, with 1 pl.
- 1867 A
Fortsetzung der Berichte über die Expedition zur Aufsuchung des angekündigten Mammuths.
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- Baikie, Balfour.** 1857 A
On the skull of a manatus from Western Africa.
Proc. Zool. Soc. London, 1857, pp. 29-33, pl. ii.
- Baird, Spencer F.** 1850 A
On the bone caves of Pennsylvania.
Proc. Amer. Assoc. Adv. Sci., 2d meeting, Cambridge, 1849, pp. 352-355.
- 1857 A
Mammals of North America; the descriptions of species based chiefly on the collection in the museum of the Smithsonian Institution, with 87 pls. of original figs., all illustrating the genera and species and including details of external appearance and osteology.
Philadelphia, 1859, 4to: pp. i-xxxiv; 1-764, with pls. i-lxxxvii, and a number of text figs.
- Balfour, F. M.** 1881 A
On the development of the skeleton of the paired fins of *Elasmobranchii*, considered in relation to its bearings on the nature of the limbs of the *Vertebrata*.
Proc. Zool. Soc. London, 1881, pp. 662-671, with pls. lvii and lviii and 2 woodcuts in the text.

- Balfour, F. M.**—Continued. 1882 A
On the structure and development of
Lepidosteus.
Philos. Trans. Roy. Soc. London, clxxiii,
pp. 359-442, pls. 21-29.
- Barbour, Edwin H.** 1890 A
Remains of the primitive elephant
found in Grinnell, Iowa.
Science, xvi, p. 263.
- 1890 B
Notes on the palæontological labora-
tory of the United States Geological
Survey under Professor Marsh.
Amer. Naturalist, xxiv, pp. 388-400, with 8
woodcuts in the text.
- Barkas, T. P.** 1868 A
On *Climaxodus*, or *Pœcilodus*; a pala-
tal tooth from the Low Main coal-shale,
Northumberland.
Geol. Magazine (1), v, pp. 495-497.
- 1868 B
On the genus *Diplodus*.
Geol. Magazine (1), v, pp. 580-581.
- 1873 A
Illustrated guide to the fish, amphib-
ian, reptilian, and supposed mamma-
lian remains of the Northumberland
Carboniferous strata.
London, 1873, 8vo., pp. i-viii, 9-117, with a
folio atlas of 10 pls. containing 248 figs.
- 1881 A
Ctenoptychinus, or Kammplatten.
Ann. and Mag. Nat. Hist. (5), viii, pp. 350-
354.
- Barkas, W. J.** 1874 A
On the microscopical structure of
fossil teeth from the Northumberland
Coal Measures.
Monthly Review of Dental Surgery, ii, pp.
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539, with figs. i-xxxii.
- 1877 A
On the genus *Ctenodus*.
Jour. and Proc. Roy. Soc. N. S. Wales, x, pp.
99-123, with pls. i-v.
Part I. On the genus *Ctenodus*, a fish found
in the true Coal Measures of Great Britain [pp.
99-103]. Part II. On the microscopic structure
of the mandibular and palatal teeth of *Ctenodus*
[pp. 110-115]. Part III. On the vomerine teeth
of *Ctenodus* [pp. 115-120]. Part IV. On the
dentary, articular, and pterygopalatine bones
of *Ctenodus* [pp. 120-123].
- 1878 A
On the genus *Ctenodus*.
Jour. and Proc. Roy. Soc. N. S. Wales, xi,
pp. 51-64.
Part V. On the sphenoid cranial bones, oper-
culum, and supposed ear bones of *Ctenodus*
[pp. 51-57]. Part VI. On the scapula?, cora-
coid, ribs, and scales of *Ctenodus* [pp. 58-64].
- Barkas, W. J.**—Continued. 1878 B
Ctenacanthus, a spine of *Hybodus*.
Jour. and Proc. Roy. Soc. N. S. Wales, xi,
pp. 145-155.
- 1878 C
On a dental peculiarity of the *Lepi-
dosteidæ*.
Jour. and Proc. Roy. Soc. N. S. Wales, x, pp.
203-207.
- Barnston, George.** 1863 A
Remarks on the genus *Lutra*, and on
the species inhabiting America.
Canadian Nat. and Geol. (1), viii, pp. 147-
158, with 6 figs. in the text.
- Barrett, L.** 1859 A
On the atlas and axis of the *Plesio-
saurus*.
Report Brit. Assoc. Adv. Sci., 28th meeting,
Leeds, 1858, pp. 78-80.
- Bartlett, John.** 1846 A
Letter regarding the finding of zeu-
glodon bones at Natchez, Miss.
Proc. Nat. Hist. Soc. Boston, ii, p. 96.
- Barton, Benjamin Smith.** 1805 A
Letter to M. Lacépède, of Paris, on
the natural history of America.
Tilloch's Philos. Mag., xii, pp. 97-103; 204-
211.
- Bassani, Francesco.** 1899 A
La ittiofauna del calcare eocenico di
Gassino in Piemonte.
Atti Accad. Sci. Fis. e Mat. Napoli (2), ix, No.
13, pp. 1-41, with pls. i-iii.
- Bate, C. Spence.** 1867 A
On the dentition of the common mole
(*Talpa europæa*).
Ann. and Mag. Nat. Hist. (3), xix, pp. 377-
381, with pl. xi.
- Baudelot, E.** 1873 A
Recherches sur la structure et le dé-
veloppement des écailles des poissons
osseux.
Arch. de Zoologie Expérimentale et Géné-
rale, ii, pp. 429-480.
- 1873 B
Observations sur la structure et le
développement des nageoires des poi-
sons osseux.
Arch. de Zoologie Expérimentale et Géné-
rale, ii, pp. xviii-xxiv of "Notes et Revue."
Treats of the structure and development of
the fin rays.
- Bauer, Franz.** 1898 A
Die Ichthyosaurier des oberen weis-
sen Jura.
Palæontographica, xlv, pp. 283-328, with
pls. xxv-xxvii.
Although describing only European species
this paper contains much of general interest
to students of this group.

- Bauer, Franz**—Continued. 1900 A
Osteologische Notizen über Ichthyosaurier.
Anat. Anzeiger, xviii, pp. 574-588, with 18 figs. in the text.
Treats of the shoulder girdle, the pelvic girdle, and auditory bones.
- Baur, George.** 1883 A
Der Tarsus der Vögel und Dinosaurier.
Morpholog. Jahrbuch, viii, pp. 417-456, with pls. xix and xx.
Author's copies of this paper were issued in 1882 as an "Inaugural-Dissertation zur Erlangung der Doctorwürde der philosophischen Facultät der Universität München," pp. 1-44, pls. xix and xx.
- 1884 A
Note on the pelvis in birds and dinosaurs.
Amer. Naturalist, xviii, pp. 1273-1275.
- 1884 B
Dinosaurier und Vögel. Eine Erwiderung an Herrn Prof. W. Dames in Berlin.
Morpholog. Jahrbuch, x, pp. 446-454.
- 1884 C
Ueber das Centrale carpi der Säugethiere.
Morpholog. Jahrbuch, x, pp. 455-457.
- 1884 D
Zur Morphologie des Tarsus der Säugethiere.
Morpholog. Jahrbuch, x, pp. 458-461.
- 1884 E
Bemerkungen über das Becken der Vögel und Dinosaurier.
Morpholog. Jahrbuch, x, pp. 613-616.
- 1884 F
Der Carpus der Paarhufer.
Morpholog. Jahrbuch, ix, pp. 597-603.
- 1885 A
A second phalanx in the third digit of a carinate bird's wing.
Science, v, p. 355.
- 1885 B
A complete fibula in an adult living carinate bird.
Science, v, p. 375.
- 1885 C
Zur Vögel-Dinosaurier-Frage.
Zoolog. Anzeiger, viii, pp. 441-443.
- 1885 D
Note on the sternal apparatus in *Iguanodon*.
Zoolog. Anzeiger, viii, pp. 561-562.
- Baur, George**—Continued. 1885 F
Zur Morphologie des Carpus und Tarsus der Reptilien.
Zoolog. Anzeiger, viii, pp. 631-638.
- 1885 F
Ueber das Archipterygium und die Entwicklung des Cheiropterygium aus dem Ichthyopterygium.
Zoolog. Anzeiger, viii, pp. 663-666.
- 1885 G
On the morphology of the tarsus in the mammals.
Amer. Naturalist, xix, pp. 86-88.
- 1885 H
On the centrale carpi of the mammals.
Amer. Naturalist, xix, pp. 195-196.
- 1885 I
The trapezium of the *Camelidæ*.
Amer. Naturalist, xix, pp. 196-197.
See also Morphologisches Jahrbuch, xi, pp. 117-118.
- 1885 J
On the morphology of the carpus and tarsus of vertebrates.
Amer. Naturalist, xix, pp. 718-720.
Contains a "morphological table" and a list of papers on the carpus and tarsus.
- 1885 K
Bemerkungen über den "Astragalus" und das "Intermedium tarsi" der Säugethiere.
Morpholog. Jahrbuch, xi, pp. 468-483, with pl. xxvii.
Cites the literature of the subject and gives the results of the author's own observations on the different groups of mammals.
- 1886 A
Ueber das Quadratum der Säugetiere.
Biolog. Centralb., vi, pp. 648-658.
Also in Sitzungsber. Gesellsch. Morphol. und Physiol. München, 1886, pp. 45-57.
- 1886 B
Ueber die Morphogonie der Wirbelsäule der Amnioten.
Biolog. Centralb., vi, pp. 332-342; 253-363.
- 1886 C
Der älteste Tarsus (*Archegosaurus*).
Zoolog. Anzeiger, ix, pp. 104-106.
Compare Baur, G., 1886 I.
- 1886 D
W. K. Parker's Bemerkungen über *Archæopteryx*, 1864, und eine Zusammenstellung der hauptsächlichsten Literatur über diesen Vogel.
Zoolog. Anzeiger, ix, pp. 106-109.

- Baur, George—Continued.** 1886 E
Die zwei Centralia im Carpus von *Sphenodon* (*Hatteria*) und die Wirbel von *Sphenodon* und *Gecko verticillatus* Laur. (*G. verus* Gray).
Zoolog. Anzeiger, ix, pp. 188-190.
- 1886 F
Bemerkungen über *Sauropsitygia* und *Ichthyopterygia*.
Zoolog. Anzeiger, ix, pp. 245-252; 323.
- 1886 G
Osteologische Notizen über Reptilien.
Zoolog. Anzeiger, ix, pp. 685-690; 733-743.
- 1886 H
Ueber die Homologien einiger Schädelknochen der Stegocephalen und Reptilien.
Anatom. Anzeiger, i, pp. 348-350.
See correction in Anat. Anzeiger, vol. ii, p. 657.
- 1886 I
The oldest tarsus (*Archegosaurus*).
Amer. Naturalist, xx, pp. 173-174.
Compare Baur, G., 1886 C.
- 1886 J
The proatlas, atlas, and axis of the *Crocodylia*.
Amer. Naturalist, xx, pp. 288-293, with 5 illus.
- 1886 K
The intercentrum in *Sphenodon* (*Hatteria*).
Amer. Naturalist, xx, pp. 465-466.
- 1886 L
The ribs of *Sphenodon* (*Hatteria*).
Amer. Naturalist, xx, pp. 979-981.
- 1886 M
Ueber die Kanäle im Humerus der Amnioten.
Morpholog. Jahrbuch, xii, pp. 299-303.
- 1887 A
Ueber die Abstammung der amnioten Wirbeltiere.
Biolog. Centralb., vii, pp. 481-493.
Also in Sitzungsbericht der Gesellschaft für Morphologie und Physiologie, München, 1887, pp. 44-61.
- 1887 B
Osteologische Notizen über Reptilien.
Fortsetzung ii.
Zoolog. Anzeiger, x, pp. 96-102.
- 1887 C
On the phylogenetic arrangement of the *Sauropsida*.
Jour. Morphology, i, pp. 93-104.
- Baur, George—Continued.** 1887 D
On the morphology and origin of the *Ichthyopterygia*.
Amer. Naturalist, xxi, pp. 837-840.
Noticed in Geol. Magazine, 1888, v, p. 325.
- 1887 E
On the morphogeny of the carapace of the *Testudinata*.
Amer. Naturalist, xxi, p. 89.
- 1887 F
Ueber die Ursprung der Extremitäten der *Ichthyopterygia*.
Bericht über die xx Versammlung des oberrhein. geolog. Vereins, pp. 1-4, with 1 plate.
Pagination taken from an author's separate; the original "Bericht" not seen.
- 1888 A
Unusual dermal ossifications.
Science, xi, p. 144.
Discusses the origin of carapace and plastron of *Testudinata*.
- 1888 B
Osteologische Notizen über Reptilien.
Fortsetzungen iii, iv, und v.
Zoolog. Anzeiger, xi, pp. 417-424; 592-597; 736-740.
- 1888 C
Beiträge zur Morphogenie des Carpus und Tarsus der Vertebraten. I. Theil. *Batrachia*. Jena; Verlag von Gustav Fischer, 1888.
8vo, pp. 1-88, with pls. i-iii.
Appended is a list of books, memoirs, etc., 80 in number, which treat of the subject discussed by the author.
- 1889 A
Die systematische Stellung von *Dermodelys* Blainv.
Biolog. Centralb., ix, pp. 149-153; 180-191; 618-619.
- 1889 B
Osteologische Notizen über Reptilien.
Fortsetzung vi.
Zoolog. Anzeiger, xii, pp. 40-47.
- 1889 C
Revision meiner Mittheilungen im Zoologischer Anzeiger, mit Nachträgen.
Zoolog. Anzeiger, xii, pp. 238-243.
- 1889 D
Neue Beiträge zur Morphologie des Carpus der Säugetiere.
Anatom. Anzeiger, iv, pp. 49-51, with 3 figs. in the text.
- 1889 E
On the morphology of the ribs and the fate of the actinosts of the median fins in fishes.
Jour. Morphology, iii, pp. 463-466.

- Baur, George—Continued.** 1889 F
On the morphology of the vertebrate skull. I. The otic elements. II. The temporal arches.
Jour. Morphology, iii, pp. 467-474.
- 1889 G
Mr. E. T. Newton on *Pterosauria*.
Geol. Magazine (3), vi, pp. 171-174.
A review of Newton's paper in Phil. Trans. Roy. Soc., vol. 179, p. 303 (1888), on *Scaphognathus*.
- 1889 H
The systematic position of *Meiolania*, Owen.
Ann. and Mag. Nat. Hist. (6), iii, pp. 54-62.
- 1889 I
On "*Aulacochelys*," Lydekker, and the systematic position of *Anosteira*, Leidy, and *Pseudotrionyx*, Dollo.
Ann. and Mag. Nat. Hist. (6), iii, pp. 273-276.
- 1889 J
On *Meiolania* and some points in the osteology of the *Testudinata*; a reply to Mr. G. A. Boulenger.
Ann. and Mag. Nat. Hist. (6), iv, pp. 37-45, with pl. vi, and 4 figs. in the text.
- 1889 K
Bemerkungen über den Carpus der Proboscidi und der Ungulaten im Allgemeinen.
Morpholog. Jahrbuch, xv, pp. 478-482, with 1 fig. in the text.
- 1890 A
On the characters and systematic position of the large sea lizards, *Mosasauroidea*.
Science, xvi, p. 262.
- 1890 B
The problems of comparative osteology.
Science, xvi, pp. 281-282.
- 1890 C
A review of the charges against the paleontological department of the U. S. Geological Survey and of the defense made by Prof. O. C. Marsh.
Amer. Naturalist, xxiv, pp. 288-304.
- 1890 D
On the classification of the *Testudinata*.
Amer. Naturalist, xxiv, pp. 530-536.
- 1890 E
Professor Marsh on *Hallopus* and other dinosaurs.
Amer. Naturalist, xxiv, pp. 569-571.
Followed by short note by Prof. E. D. Cope.
- Baur, George—Continued.** 1890 F
The genera of the *Chelonioidea*.
Amer. Naturalist, xxiv, pp. 486-487.
- 1891 A
The horned saurians of the Laramie formation.
Science, xvii, pp. 216-217.
- 1891 B
Notes on some little-known American fossil tortoises.
Proc. Acad. Nat. Sci. Phila., 1891, pp. 411-430.
- 1891 C
The pelvis of the *Testudinata*, with notes on the evolution of the pelvis in general.
Jour. Morphology, iv, pp. 345-359, with 13 figs. in the text.
- 1891 D
Remarks on reptiles generally called *Dinosauria*.
Amer. Naturalist, xxv, pp. 434-454.
Contains a list of 32 papers cited. A review of this paper by Dames is found in Neues Jahrb. Min., etc., 1893, i, Ref., pp. 545-547.
- 1892 A
Bemerkungen über verschiedene Arten von Schildkröten.
Zoolog. Anzeiger, xv, pp. 155-159.
- 1892 B
On the morphology of the skull in the *Mosasauroidea*.
Jour. Morphology, vii, pp. 1-22, with pls. i and ii.
- 1892 C
On the taxonomy of the genus *Emys*.
Proc. Amer. Philos. Soc., xxx, pp. 40-44; 245.
In the "addition" to his note, on page 245, Dr. Baur made some modifications of his views as expressed on pp. 40-44.
- 1893 A
Notes on the classification and taxonomy of the *Testudinata*.
Proc. Amer. Philos. Soc., xxxi, pp. 210-225.
- 1893 B
Notes on the classification of the *Cryptodira*.
Amer. Naturalist, xxvii, pp. 672-675.
- 1893 C
The discovery of Miocene Amphibæniæ.
Amer. Naturalist, xxvii, pp. 998-999.
Describes new genus and species *Hyporhina antiqua*; new family *Hyporhinae*.
- 1894 A
Bemerkungen über die Osteologie der Schläfengegend der höheren Wirbeltiere.
Anatom. Anzeiger, x, pp. 315-330.
Includes a list of the titles of 24 papers on the subject discussed.

- Baur, George**—Continued. 1895 A
Cope on the temporal part of the skull, and on the systematic position of the *Mosasauridae*. A reply.
Amer. Naturalist, xxix, pp. 998-1002.
- 1895 B
The fins of *Ichthyosaurus*.
Jour. Geology, iii, pp. 238-240.
A review of Prof. Rich. Owen's paper in the Trans. Geol. Soc., ser. 2, vol. v, pp. 511-514.
- 1895 C
Die Palatingegend der *Ichthyosauria*.
Anatom. Anzeiger, x, pp. 456-459, with 1 fig.
- 1895 D
Ueber die Morphologie des Unterkiefers der Reptilien.
Anatom. Anzeiger, xi, pp. 410-415, with 4 figs. Nachtrag, p. 569.
Announces the finding of a hitherto unrecognized bone in the lower jaw of reptiles, the *prespleniale*.
- 1895 E
Das Gebiss von *Sphenodon* (*Hatteria*) und einige Bemerkungen über Prof. Rud. Burckhardt's Arbeit über das Gebiss der *Sauropsidae*.
Anatom. Anzeiger, xi, pp. 436-439.
- 1896 A
The paroccipital of the *Squamata* and the affinities of the *Mosasauridae* once more. A rejoinder to Prof. E. D. Cope.
Amer. Naturalist, xxx, pp. 143-147, with pl. iv.
See also pp. 327-329; 411-412.
- 1896 B
Bemerkungen über die Phylogenie der Schildkröten.
Anatom. Anzeiger, xii, pp. 561-570.
- 1896 C
The *Stegocephali*: A phylogenetic study.
Anatom. Anzeiger, xi, pp. 657-673, with 8 figs.
Contains description of the osteology of this group and the titles of 34 papers and books relating to the subject.
- 1897 A
Archegosaurus.
Amer. Naturalist, xxxi, pp. 975-980.
A review of Otto Jaekel's paper on "Die Organization von *Archegosaurus*," and a discussion of the composition of the vertebral column.
- 1897 B
Ueber die systematische Stellung der *Microsaurier*.
Anatom. Anzeiger, xiv, pp. 148-151.
- Baur, G., and Case, E. C.** 1897 A
On the morphology of the skull of the *Pelycosauria* and the origin of the mammals.
Anatom. Anzeiger, xiii, pp. 109-120, with 3 figs.
Abstract in Science (2), v, pp. 592-593.
- 1899 A
The history of the *Pelycosauria*, with a description of the genus *Dimetrodon*.
Trans. Amer. Philos. Soc. (2), xx, pp. 1-58, with pls. i-iii, with 7 figs. in the text.
Appended is a list of titles of works on the subject, 70 in number.
- Bayer, Franz.** 1885 A
Ueber die Extremitäten einer jungen *Hatteria*.
Sitzungsber. k. Akad. Wissensch., Wien, xc, i Abth., pp. 237-245, with 1 pl.
- Bayle, Émile de.** 1855 A
Notice sur le système dentaire de l'*Anthracotherium magnum*.
Bull. Soc. Geol. France (2), xii, pp. 936-947, with pl. xxii.
- Beard, J.** 1890 A
The interrelationships of the *Ichthyopsida*.
Anatom. Anzeiger, v, pp. 146-159, 179-188.
- Beddard, Frank E.** 1888 A
Note on the systematic position of *Monitor*.
Anatom. Anzeiger iii, pp. 204-206.
- 1897 A
Note upon intercentra in the vertebral column of birds.
Proc. Zool. Soc. London, 1897, pp. 465-472, with 4 figs. in the text.
- Belcher, Edward.** 1856 A
Notice of the discovery of *Ichthyosaurus* and other fossils in the late Arctic exploring expedition, 1852-1854.
Report Brit. Assoc. Adv. Sci., 25th meeting, Glasgow, 1855, p. 79.
Found, latitude 77° 16' N., longitude, 96° W.
- Bell, Robert.** 1898 A
On the occurrence of mammoth and mastodon remains around Hudson Bay.
Bull. Geol. Soc. America, ix, pp. 369-390, with 1 fig. in the text.
See also Science vii (n. s.), p. 80.
- Bemmelen, J. F. van.** 1896 A
Bemerkungen zur Phylogenie der Schildkröten.
Compte-rendu des séances du troisième Congrès Internat. de Zoologie, Leyden, 1895, pp. 322-335.

- Bemmelen, J. F. van**—Cont'd. 1896 B
Bemerkungen über den Schädelbau
von *Dermochelys coriacea*.
Festschrift zum 70sten Geburtstage von Carl
Gegenbaur, ii, pp. 279-285, with pl. i.
- 1899 A
On reptilian affinities in the temporal
region of the monotreme skull.
Proc. Fourth Internat. Congress of Zoology,
Cambridge, England, pp. 162-164.
- Bensley, B. A.** 1900 A
On the inflection of the angle of the
jaw in the *Marsupialia*.
Science (2), xii, pp. 558-559.
- Bensted, W. H.** 1861 A
Remains of American "*Missourium*"
associated with flint implements.
The Geologist, iv, pp. 217-221. See also p.
262.
Letter containing extract from Albert
Koch's "Description of the *Missourium*, or
Missouri Leviathan, together with its supposed
habits and Indian tradition." London, E.
Fisher, 1841.
- Béraneck, Ed.** 1887 A
Ueber das Parietalauge der Reptilien.
Jenaische Zeitschrift, xxi (xiv), pp. 374-
410, with pp. 374-410.
- Berthold, Arnold A.** 1850 A
Ueber das Backenzahnsystem des
Narwals.
Archiv. f. Anat., Physiol. u. wissenschaft.
Med., Jahrg. 1850, pp. 386-392, pl. x, figs. 7, 8.
- Bettany, G. T.** 1873 A
Oreodon remains in the Woodwardian
Museum, Cambridge.
Nature, viii, pp. 309-311.
See also Nature, viii, p. 385.
- 1876 A
On the genus *Merycochaerus* (family
Oreodontidae), with descriptions of two
new species.
Quart. Jour. Geol. Soc., xxxii, pp. 259-273,
with pls. xvii, xviii.
- Beyer, Samuel Walker.** 1899 A
Geology of Story County.
Iowa Geol. Survey, ix, pp. 157-239.
Refers to the finding of a tooth of *Elephas*
primigenius at Polk City.
- Beyrich, E.** 1848 A
Ueber *Xenacanthus decheni* und *Holacanthus gracilis*, zwei Fische aus der
Formation des Rothliegenden in Nord
Deutschland.
Bericht Verhandl. k. preuss. Akad. Wis-
sensch. zu Berlin, 1848, pp. 24-33.
- Beyrich, E.**—Continued. 1850 A
Ueber einige organische Reste der
Lettenkohlenbildung in Thuringen.
Zeitschr. deutsch. geol. Gesellsch., ii, pp.
153-168.
- 1877 A
Ueber einen *Pterichthys* von Gerol-
stein.
Zeitschr. deutsch. geol. Gesellsch., xxix, pp.
751-756, and pl. x.
- Bibbins, Arthur.** 1895 A
Notes on the palæontology of the
Potomac formation.
Johns Hopkins University Circulars, xv,
No. 121, pp. 17-20, with 2 figs.
Mentions the finding of teeth of certain
dinosaurs.
- Bienz, Amié.** 1895 A
Dermatemys mavi Gray; eine osteolo-
gische Studie mit Beiträgen zur Kennt-
niss vom Baue der Schildkröten.
Revue suisse de zool. et Ann. Musée d' Hist.
Nat. Genève, iii, pp. 61-135, with pls. ii, iii.
The literature of the subject is presented,
p. 135.
- Billings, E.** 1863 A
On the remains of the fossil elephant
in Canada.
Canadian Nat. and Geol. (1), viii, pp. 135-
147, with 5 figs. in the text.
- Bischoff, Th. Ludwig Wilhelm.** 1840 A
Lepidosiren paradoxa. Anatomisch
untersucht und beschrieben.
Leipzig, 1840, 4 to, pp. 1-vi; 1-34, with pls.
i-vii.
- Blackmore, Humphrey P.** 1874 A
On fossil *Arvicolidæ*.
Proc. Zool. Soc. London, 1874, pp. 460-471,
with 3 figs. of the teeth.
- Blainville, H. M. Ducrotay de.** 1839 A
Recherches sur l'ancienneté des
Édentés terrestres à la surface de la
terre.
Comptes rendus de l'Acad. Sci. Paris, viii,
pp. 65-69.
See also Ann. Sci. Nat. (2), xi, pp. 113-122.
- 1839 B
Mémoire sur les traces qu'ont lais-
sées à la surface de la terre les Édentés
terrestres.
Comptes rendus de l'Acad. Sci. Paris, viii,
pp. 139-146.
- 1839 C
Recherches sur l'ancienneté des
Édentés terrestres à la surface de la
terre.
Ann. Sci. Naturelles (2), xi, pp. 113-122.

Blainville, H. M. Ducrotay de—Continued. 1864 A

Ostéographie ou description iconographique comparée du squelette et du système dentaire des mammifères récent et fossiles pour servir de base à la zoologie et à la géologie.

Vols. i-iv, 4to, with pls. vols. i-iv.

Vol. i, *Primates, Chiroptera, Insectivora*; vol. ii, *Carnivora*; vol. iii, *Gravigrada, Ungulagrade*; vol. iv, *Ungulagrade, Bradypus*.

This important work was issued in livraisons from 1839 to 1864. Hence, in the citations found in the catalogue of species, this year, 1864, must be regarded as arbitrary.

Blake, Chas. C. 1862 A
On a fossil elephant from Texas (*E. texianus*).

The Geologist, v, pp. 57-58, with pl. iv.

1862 B

Elephas texianus v. *columbi*.

The Geologist, vi, pp. 56-60, with 1 text fig.

1863 A

On the geological evidences of horses in the New World.

The Geologist, vii, pp. 24-28.

Blake, William P. 1855 A
Remains of the mammoth and mastodon in California.

Amer. Jour. Sci. (2), xix, p. 133.

1864 A

Note on fossil remains of the horse and elephant, mingled, at Mare Island, San Francisco Bay.

Proc. California Acad. Nat. Sci., iii, p. 166.

The species not determined.

1867 A

Fossil fish in Great Basin, Nevada.

Proc. California Acad. Nat. Sci., iii, pp. 306-307.

No genera or species designated.

1867 B

Notice of fossil elephants' teeth from the northwest coast.

Proc. California Acad. Nat. Sci., iii, p. 325.

Calls attention to the finding of teeth and tusks of elephants in Alaska; also gives localities in California where such remains have been discovered.

1868 A

Note upon the occurrence of fossil remains of the tapir in California.

Amer. Jour. Sci. (2), xlv, p. 381.

1870 A

On a fossil tooth from Table Mountain.

Amer. Jour. Sci. (2), 1, pp. 262-263.

Blake, William P.—Continued. 1898 A
Remains of a species of *Bos* in the Quaternary of Arizona.

Amer. Geologist, xxii, pp. 65-72.

1898 B

Bison latifrons and *B. arizonica*.

Amer. Geologist, xxii, pp. 247-248.

1900 A

Remains of the mammoth in Arizona.

Amer. Geologist, xxvi, p. 257.

Records occurrence of *Elephas primigenius*(?) at Yuma.

Blanchard, Émile. 1857 A

De la détermination de quelques oiseaux fossiles et des caractères ostéologiques des Gallinacés ou Gallides.

Annales Sci. Naturelles (4), Zool., vii, pp. 91-106, with pls. x-xii.

1859 A

Recherches sur les caractères ostéologiques des oiseaux appliquées à la classification naturelle de ces animaux.

Annales Sci. Naturelles (4), Zool., pp. 11-145.

1860 A

Observations sur le système dentaire chez les oiseaux.

Comptes rend. des séances de l'Acad. sciences, Paris, 1, pp. 540-542.

Blasius, Wilhelm. 1884 A
Zur Geschichte der Ueberreste von *Alca impennis* Linn.

Jour. für Ornithologie, xxxii, pp. 58-176.

Blatchley, W. S. 1898 A
The geology of Lake and Porter counties, Indiana.

22d Ann. Report Depart. Geol. and Natural Resources [of Indiana] for 1897, pp. 25-104, with 9 figs. in the text.

Contains notes on the finding of the mammoth and the mastodon.

Bloch, Leopold. 1900 A
Schwimmlase, Knochenkapsel und Weber'scher Apparat von *Nemachilus barbatulus* Günther.

Jenaische Zeitschr. Naturwiss., xxxiv, pp. 1-64, with pls. i, ii, and 12 figs. in the text.

Appended is a list of 75 memoirs and papers on the subject.

Blyth, E. 1837 A
On the osteology of the great auk (*Alca impennis*).

Proc. Zool. Soc. London, 1837, pp. 122-123.

Boas, J. E. V. 1884 A
Bemerkungen über die Polydactylie des Pferdes.

Morpholog. Jahrbuch, x, pp. 182-184.

- Boas, J. E. V.**—Continued. 1890 A
 Ueber den Metatarsus der Wieder-
 käuer.
 Morpholog. Jahrbuch, xvi, pp. 525-533, with
 6 figs. in the text.
- Bojanus, L. H.** 1827 A
 De uro nostrate eiusque sceleto com-
 mentatio.
 Nova Acta Acad. Cæs. Leop.-Car., xiii, pt.
 ii, pp. 413-478, with 5 pls.
 Refers (p. 427) *Bison latifrons* to *Urus priscus*.
- Born, G.** 1876 A
 Zum Carpus und Tarsus der Saurier.
 Morpholog. Jahrbuch, ii, pp. 1-26, with pl. i.
- 1880 A
 Nachträge zu "Carpus und Tarsus."
 Morpholog. Jahrbuch, vi, pp. 49-78, with pl. i.
 Appended is a list of authors and works
 referred to, 14 in number.
- Boule, Marcellin.** 1899 A
 Observations sur quelques équidés
 fossiles.
 Bull. Soc. Geol., France (3), xxvii, pp. 531-
 542, with 22 figs. in the text.
- Boulenger, G. A.** 1882 A
 Catalogue of the *Batrachia Gradientia*
s. Caudata and *Batrachia Apoda* in the
 collection of the British Museum; sec-
 ond edition.
 Pp. i-viii; 1-127, with pls. i-ix.
- 1882 B
 Catalogue of the *Batrachia Salientia*
s. Ecaudata in the collection of the Brit-
 ish Museum; second edition.
 Pp. i-xvi; 1-503, with pls. i-xxx, with nu-
 merous figs. in the text.
- 1884 A
 Synopsis of the families of existing
Lacertilia.
 Ann. and Mag. Nat. Hist. (5), xiv, pp. 117-
 122.
- 1885 A
 Catalogue of the lizards in the British
 Museum.
 Vol. i, pp. 436, pls. 32. Vol. ii, pp. 497, pls.
 24. London, 1885.
- 1887 A
 Catalogue of the lizards in the British
 Museum.
 Vol. iii, pp. 575; pls. 40. London, 1887.
- 1888 A
 Remarks on a note by Dr. G. Baur on
 the Pleurodiran chelonians.
 Ann. and Mag. Nat. Hist. (6), ii, pp. 352-354.
 Dr. Baur's note occurs in Zoolog. Anzeig.,
 Aug., 1888.
- Boulenger, G. A.**—Continued. 1889 A
 Catalogue of the chelonians, rhy-
 chocephalians, and crocodiles in the
 British Museum.
 London, 1889, pp. 311, 6 pls.
- 1889 B
 Remarks in reply to Dr. Baur's arti-
 cle on the systematic position of *Miola-*
nia.
 Ann. and Mag. Nat. Hist. (6), iii, pp. 138-141,
 with figs. in the text.
- 1891 A
 Notes on the osteology of *Heloderma*
horridum and *H. suspectum*, with re-
 marks on the systematic position of the
Helodermatidae and on the vertebræ of
 the *Lacertilia*.
 Proc. Zool. Soc. London, 1891, pp. 109-118,
 with 6 woodcuts.
- 1891 B
 On British remains of *Homœasaurus*,
 with remarks on the classification of the
Rhynchocephalia.
 Proc. Zool. Soc. London, 1891, pp. 167-172,
 with 2 woodcuts.
- 1893 A
 Catalogue of the snakes in the British
 Museum (Natural History). Vol. i,
 containing the families *Typhlopidae*,
Glaconidae, *Boidae*, *Ilysiidae*, *Uropeltidae*,
Xenopeltidae, and *Colubridae Aglyphæ*,
 part.
 Pp. i-xiii; 1-448, with pls. i-xxviii and 26
 figs. in the text.
- 1894 A
 Catalogue of the snakes in the British
 Museum (Natural History). Vol. ii,
 containing the conclusion of the *Colu-*
bridae Aglyphæ.
 Pp. i-xi; 1-377, with pls. i-xx, and 25 figs. in
 the text.
- 1895 A
 Remarks on the value of certain cra-
 nial characters employed by Professor
 Cope for distinguishing lizards from
 snakes.
 Ann. and Mag. Nat. Hist. (6), xvi, pp. 366-
 367, with 1 fig. in the text.
- 1896 A
 Remarks on the dentition of snakes
 and on the evolution of the poison fangs.
 Proc. Zool. Soc. London, 1896, pp. 614-616.

Boulenger, G. A.—Continued. 1896 B
On the occurrence of Schlegel's gaviid
(*Tomistoma schlegelii*) in the Malay pen-
insula, with remarks on the atlas and
axis of the crocodilians.

Proc. Zool. Soc. London, 1896, pp. 628-633,
with 3 figs. in the text.

1896 C

Catalogue of the snakes in the British
Museum (Natural History) Vol. iii,
containing the *Colubridæ* (*Opisthoglyphæ*
and *Proteroglyphæ*), *Amblycephalidæ*,
and *Viperidæ*.

Pp. i-xiv; 1-727, with 37 figs. in the text.

Bouvé, T. T.

1859 A

Statement with regard to *Zeuglodon*
cetoides.

Proc. Nat. Hist. Soc. Boston, vi, pp. 421-422.

1859 B

Communication regarding priority of
describing fossil footprints of the Con-
necticut Valley.

Proc. Nat. Hist. Soc. Boston, vii, pp. 49-53.

Bowerbank, J. S.

1848 A

Microscopical examination on the
structure of the bones of *Pterodactylus*
giganteus and other fossil animals.

Quart. Jour. Geol. Soc. Lond., iv, pp. 2-10,
with pls. i, ii.

1851 A

On the pterodactyles of the Chalk
formation.

Proc. Zool. Soc. Lond., 1851, pt. xix, pp. 14-
20, with pl. iv.

1852 A

On the probable dimensions of the
great shark (*Carcharias megalodon*) of
the Red Crag.

Report Brit. Assoc. Adv. Sci., 21st meeting,
Ipswich, 1851, p. 54.

1852 B

On the probable dimensions of *Car-*
charodon megalodon from the Crag.

Ann. and Mag. Nat. Hist. (2), ix, pp. 120-123.

Bowers, Stephen.

1889 A

An abstract of a letter regarding the
finding of the remains of fossil verte-
brates in Ventura, Cal.

Amer. Geologist, iv, pp. 391-392.

Boyd, C. H.

1881 A

Remains of the walrus (?) in Maine.

Proc. U. S. Nat. Mus., iv, pp. 234-235.

Brainerd, —.

1852 A

Fossil fishes.

Annals of Science (Cleveland, Ohio), i, pp.
18-20, with 3 text figs.

No specific name is applied to the fishes
described. They are now known as *Gonatodus*
brainerdi (Newb.).

Branco, W.

1885 A

[Review of G. Baur on "Dinosa-
rier und Vögel" and W. Dames on
"Entgegnung an Herrn Dr. Baur"].

Neues Jahrbuch Min. Geol. u. Palæont, 1885,
ii, Referate, pp. 437-441.

1887 A

Beiträge zur Kenntniss der Gattung
Lepidotus.

Abhandl. zur geolog. Specialkarte von
Preussen und der Thüringischen Staaten vii.
Heft 4. pp. 1-85, with pls. i-vii.

1897 A

Die menschenähnlichen Zähne aus
dem Bohnerz der schwäbischen Alb.
Teil ii, Art und Ursache der Reduk-
tion des Gebisses bei Säugern.

Stuttgart, 1897, pp. 1-128.

Brandt, Alexander.

1867 A

Kurze Bemerkungen über aufrecht-
stehende Mammuthleichen.

Bull. Soc. Imp. des Naturalistes de Moscou,
xli, pt. 2, pp. 241-256.

Brandt, Ed.

1868 A

Untersuchungen über das Gebiss der
Spitzmäuse (*Sorex* Cuv.).

Bull. Soc. Imp. Nat. Moscou, xlii. pt. 2, pp.
76-95, with pls. i-vi.

1870 A

Untersuchungen über das Gebiss der
Spitzmäuse (*Sorex* Cuv.).

Bull. Soc. Imp. Nat. Moscou, xliii, pt. 2, pp.
1-40.

1888 A

Vergleichend - anatomische Unter-
suchungen über die Griffelbeine (*Ossa*
calamiformia) der Wiederkäuer (*Rumi-*
nantia).

Zoolog. Anzeiger xi, pp. 542-548.

Brandt, Johann Friedrich.

1840 A

Beiträge zur Kenntniss der Natur-
geschichte der Vögel mit besonderer
Beziehung auf Skeletbau und verglei-
chende Zoologie.

Mém. Acad. Imp. Sci. St. Pétersbourg (6), Sci.
Nat., iii, pp. 81-237, with pls. i-xviii.

Brandt, Johann Friedrich—C't'd. 1844 A
Notiz über die fossilen Knochen des
Cetotheriums.

Verhandl. d. kais.-russ. mineralog. Gesellschaft. St. Petersburg, 1844, pp. 240-244.

1848 A

On the position in which the mammoth and rhinoceros have been found in Siberia; from a letter to Baron A. von Humboldt.

Quart. Jour. Geol. Soc., iv, pp. 9-12. (Translations and notices.)

1849 A

Symbolæ Sirenologicæ, quibus præcipue
Rhytina historia naturalis illustratur.

Mém. Acad. Imp. St. Pétersbourg (6), Sci. Nat., v.; Zool. et Physiol., pp. 1-160, with pls. i-v.

1849 B

De *Rhinocerotis antiquitatis* seu *pallasii* structura externa et osteologica observationes e reliquiis quæ in museis Petropolitans servantur erutæ.

Mém. Acad. Sci. St. Pétersbourg (6), v, pt. ii, pp. 161-416, with pls. i-xxiv.

1855 A

Beitrage zur nähern Kenntniss der Säugethiere Russlands.

Mém. Acad. Imp. Sci. St. Pétersbourg (6), vii, pp. 1-365, with pls. i-iii and i-xi.

Abhandlung 3 considers the question of the specific identity of the beaver of America with that of the Old World; also the variation of certain bones of the beaver's skull. Abhandlung 4 treats of the gradual advances in the classification of the rodents, with especial reference to the beaver. Abhandlung 5 deals with stages of craniological development of the rodents and the relationships and the classification to be determined therefrom, with especial reference to the beaver.

1862 A

Bemerkungen über die Zahl der Halswirbel der Sirenien.

Mélanges Biol. Bull. Acad. Imp. Sci. St. Pétersb., iv, pp. 125-128.

1862 B

Einige Worte über die verschiedenen Entwicklungsstufen der Nasenbeine der Seekühe (*Sirenia*).

Mélanges Biol. Bull. Acad. Imp. Sci. St. Pétersb., iv, pp. 129-132.

1862 C

Bemerkungen über die Verbreitung und Vertilgung der *Rhytina*.

Mélanges Biol. Bull. Acad. Imp. Sci. St. Pétersb., iv, pp. 259-268.

Brandt, Johann Friedrich—C't'd. 1866 A
Mittheilungen über die Gestalt und Unterscheidungsmerkmale des Mammuth oder Mamont (*Elephas primigenius*).

Mélanges Biol. Bull. Acad. Imp. Sci. St. Pétersb., v, pp. 567-605, with 1 pl. Also "Ergänzungen," pp. 640-644.

1866 B

Zur Lebensgeschichte des Mammuth.

Bull. Acad. Imp. Sci. St. Pétersb., x, pp. 111-118.

1866 C

Nochmaliger Nachweis der Vertilgung der nordischen oder Steller'schen Seekuh (*Rhytina borealis*).

Bull. Soc. Imp. des Naturalistes de Moscou, xxxix, pp. 572-597.

1867 A

Ergänzende Mittheilungen zur Erläuterung der ehemaligen Verbreitung und Vertilgung der Steller'schen Seekuh.

Mélanges Biol. Bull. Acad. Imp. Sci. St. Pétersb., vi, pp. 223-232.

Contains an account of the literature of the subject.

1867 B

Untersuchungen über die geographische Verbreitung des Renthiers (*Cervus tarandus* Linn.) in Bezug auf die Würdigung der fossilen Reste derselben.

Verhandl. russ.-kais. mineralog. Gesellschaft zu St. Petersburg (2), ii, pp. 36-132.

1867 C

Die geographische Verbreitung des Zubr, oder Bison, des Auerochsen der Neuern (*Bos bison* seu *bonasus*).

Verhandl. russ.-kais. mineral. Gesellschaft zu St. Petersburg (2), ii, pp. 133-185.

1867 D

Einige Schlussworte zum Nachweis der Vertilgung der *Rhytina*.

Bull. Soc. Imp. des Naturalistes de Moscou, xl, pt. i, pp. 23-38.

See also pt. ii, pp. 508-543.

1868 A

Symbolæ Sirenologicæ. Fasciculi ii et iii. Sireniorum, Pachydermatum, Zeuglodontum et Cetaceorum ordinis osteologia comparata, nec non Sireniorum generum Monographie.

Mém. Acad. Imp. Sci. St. Pétersbourg (7), xii, No. 1, pp. 1-383, with pls. i-ix.

- Brandt, Johann Friedrich**—C't'd. 1869 A
De Dinotheriorum genere Elephantid-
orum familiæ adjungendo, nec non de
Elephantidorum generum craniologia
comparata.
Mém. Acad. Imp. Sci. St. Pétersbourg (7),
xiv, No. 1, pp. 1-37.
- 1869 B
Untersuchungen über die Gattung
der Klippschliefer (*Hyrax*. Herm.),
besonders in anatomischer und ver-
wandtschaftlicher Beziehung nebst Be-
merkungen über ihre Verbreitung und
Lebensweise.
Mém. Acad. Imp. Sci. St. Pétersbourg (7),
xiv, pp. i-vi; 1-127, with pls. i-iii.
- 1873 A
Untersuchungen über die fossilen und
subfossilen Cetaceen Europa's. Mit
Beiträgen von Van Beneden, Cornalia,
Gastaldi, Quenstedt und Paulson nebst
einem geologischen Anhang von Bar-
bot de Marny, G. v. Helmersen, A.
Goebel und Th. Fuchs.
Mém. Acad. Imp. Sci. St. Pétersbourg (7),
xx, No. 1, pp. i-viii; 1-372, with pls. i-xxiv.
- 1874 A
Ergänzungen zu den fossilen Cetaceen
Europa's.
Mém. Acad. Imp. Sci. St. Pétersbourg (7),
xxi, No. 6, pp. i-iv; 1-54, with pls. i-v.
- 1878 A
Tentamen synopsos rhinocerotidum
viventium et fossilium.
Mém. Acad. Imp. Sci. St. Pétersbourg (7),
xxvi, No. 5, pp. i-ii; 1-66, with one plate.
- Braus, Hermann.** 1898 A
Über die Extremitäten der Selachier.
Verhandl. Anat. Gesellsch., 12th meeting,
Kiel, 1898, pp. 166-179, with 1 page of figs.
- Brevoort, J. C.** 1859 A
Remains of the American mastodon
found on Long Island, near New York.
Proc. Amer. Assoc. Adv. Sci., 12th meeting,
Baltimore, 1858, pp. 232-234.
- Brewer, W. H.** 1866 A
Alleged discovery of an ancient hu-
man skull in California.
Amer. Jour. Sci. (2), xlii, p. 424.
- Bridge, T. W.** 1877 A
The cranial osteology of *Amia calva*.
Jour. Anat. and Physiol., xi, pp. 605-622; pl.
xxiii.
- Bridge, T. W.**—Continued. 1889 A
Some points in the cranial anatomy
of *Polypterus*.
Proc. Birmingham Philos. Soc., vi, pp. 118-
130, with pls. i-ii.
- 1895 A
On certain features in the skull of
Osteoglossum formosum.
Proc. Zool. Soc. Lond., 1895, pp. 302-310, with
pl. xxii.
- 1896 A
The mesial fins of Ganoids and
Teleosts.
Jour. Linn. Soc. Lond., xxv, pp. 530-602,
with pls. xxi-xxiii.
- 1898 A
On the morphology of the skull in
the Paraguayan *Lepidosiren* and in
other Dipnoids.
Trans. Zool. Soc. Lond., xiv, pp. 325-376,
with pls. xxviii, xxix.
- Bridge, T. W., and Haddon, A. C.**
1889 A
Contributions to the anatomy of
fishes. I. The air bladder and Weber-
ian ossicles in the *Siluridae*.
Proc. Roy. Soc. Lond., xlvi, pp. 309-328.
- 1892 A
Contributions to the anatomy of
fishes. II. The air bladder and Weber-
ian ossicles in the Siluroid fishes.
Proc. Roy. Soc. Lond., lii, pp. 139-157.
- Bridge, William J.** 1879 A
On the osteology of *Polyodon folium*.
Philos. Trans. Royal Soc. of Lond. for 1878,
clxix, pt. ii; pp. 683-733, with pls. lv-lvii.
- Briggs, C.** 1838 A
Bones of the mastodon.
Second Annual Report Geol. Surv. Ohio,
pp. 127-129.
- Britton, N. L.** 1885 A
[Remarks on finding of mastodon
remains east of the Hudson River; fol-
lowed by remarks by Prof. D. S. Mar-
tin and Dr. O. P. Hubbard.]
Trans. N. Y. Acad. Sci., v, pp. 14, 15.
- Broadhead, G. C.** 1870 A
Fossil horse in Missouri.
Trans. Acad. Sci. St. Louis, iii, pp. xx-xxi.
Reprinted in Amer. Naturalist, iv, p. 60.
Found in Bates County, Mo., 31 feet below
the surface; said by Leidy to belong to an ex-
tinct species.

- Broadhead, G. C.**—Continued. 1870 B
Bones of large mammals in drift.
Trans. Acad. Sci. St. Louis, iii, pp. xxii, xxiii.
Tooth of extinct ox found in Missouri; also in Illinois. Probably *Bos latifrons*.
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- 1881 A
The mastodon.
Kansas City Review of Science and Industry, iv, pp. 519-530.
Mentions numerous localities in North America where the bones of the mastodon have been found.
- Broili, Ferdinand.** 1899 A
Ein Beitrag zur Kenntniss von *Eryops megacephalus* (Cope).
Palæontographica, xlv, pp. 61-84, with pls. viii-x.
- Brongniart, Chas.** 1888 A
Sur un nouveau poisson fossile du terrain houiller de Commeny (Allier), *Pleuracanthus gaudryi*.
Bull. Soc. Géol. France (3), xvi, pp. 546-550, with 1 fig. in the text.
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- 1888 B
Sur un nouveau poisson fossile du terrain houiller de Commeny (Allier), *Pleuracanthus gaudryi*.
Le Naturaliste, x, pp. 178-180, with 1 fig. in the text.
The figure gives a restoration of this remarkable Elasmobranch.
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- 1888 C
Études sur le terrain houiller de Commeny. Faune ichthyologique. Première partie.
Extracted from Bull. de la Société de l'Industrie minière (3), ii, livrais. 4^{me}, pp. 3-38, with 15 figs. in the text.
This paper is devoted to the description of the structure and relationships of the genus *Pleuracanthus*, and especially the species *P. gaudryi*.
- Bronn, Heinrich Georg.** 1837 A
Lethæa geognostica, oder Abbildungen und Beschreiben der für die Gebirgs-Formation bezeichnendsten Versteinerungen.
Vol. i, pp. i-vi; 1-544, with pls. i-xxvii of the atlas.
Vol. i contains an account of palæontology up to the period of the chalk.
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- 1838 A
Lethæa geognostica, etc.
Vol. ii, pp. 545-1350, with pls. xxviii-xlvii of the atlas.
Vol. ii contains the palæontology from the beginning of the Cretaceous to the recent period.
- Brooke, Victor.** 1874 A
On Slater's muntjac and other species of the genus *Cervulus*.
Proc. Zool. Soc. Lond., 1874, pp. 33-42, with pls. viii, ix, and 5 figs. in the text.
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- 1878 A
On the classification of the *Cervidæ*, with a synopsis of the existing species.
Proc. Zool. Soc. Lond., 1878, pp. 883-928, with pl. lv and 19 figs. in the text.
- Broom, R.** 1897 A
On an apparently hitherto undescribed nasal-floor bone in the hairy armadillo.
Jour. Anat. and Physiol., xxx, pp. 280-282.
- Brown, Campbell.** 1900 A
Ueber das genus *Hybodus* und seine systematische Stellung.
Palæontographica, xlv, pp. 149-174, with pls. xv, xvi, and 7 figs. in the text.
- Browne, Montagu.** 1889 A
On a fossil fish (*Chondrosteus*) from Barrow-on-Soar, hitherto recorded only from Lyme Regis.
Trans. Leicester Literary and Philos. Soc., 1889, pp. 16-36, with pls. i, ii, and 3 text figs.
- Bru, D. Jean Baptiste.** 1804 A
Description des os du *Megatherium* fait en montant le squelette.
Annales du Muséum, v, pp. 387-400.
- Bruce, Adam T.** 1883 A
Observations upon the brain casts of Tertiary mammals.
Contrib. E. M. Mus. Geol. and Arch. Princeton Coll. Bull. No. 3, pp. 36-45, with pl. vii.
- Brühl, Bernhard Carl.** 1847 A
Die Skelettlehre der Fische.
Vienna, 1847, 8vo., pp. 1-254, with atlas of 19 pls.
- Buckland, William.** 1824 A
Notice on the *Megalosaurus*, or great fossil lizard of Stonesfield.
Trans. Geol. Soc. Lond. (2), i, pp. 390-396, with pls. xl-xliv.
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- 1831 A
On the occurrence of the remains of elephants and other quadrupeds in the cliffs of frozen mud in Eschscholtz Bay, within Bering Strait, and in other distant parts of the shores of the arctic seas.
Appendix to Beechey's Narrative of a voyage to the Pacific and Behring's Strait to co-operate with the polar expeditions; performed on H. M. S. *Blossom*, pp. 593-612, with pls. i-iii.

- Buckland, William**—Continued. 1837 A
Geology and mineralogy considered with reference to natural theology.
In two volumes, Philadelphia, 1837.
Vol. i contains the text, consisting of 443 pages. Vol. ii contains the pls. i-lxix, the explanation of the plates, and the index.
- Buckley, S. B.** 1843 A
Notice of the discovery of a nearly complete skeleton of the *Zygodon* of Owen (*Basilosaurus* of Harlan).
Amer. Jour. Sci., xliv, pp. 409-412.
Reprinted in Edinburgh New Philos. Jour., vol. xxxv, pp. 77-79, 1843.
- 1846 A
On the Zeuglodon remains of Alabama.
Amer. Jour. Sci. (2), ii, pp. 125-129.
Abstract of this paper printed in Neues Jahrbuch für Mineralogie, 1847, pp. 510-512.
- Büchner, Eug.** 1891 A
Die Abbildungen der nordischen Seekuh (*Rhytina gigas* Zimm.). Mit besonderer Berücksichtigung neu aufgefundener Materialien in seiner Majestät höchst Eigenen Bibliothek zu Zarskoje Sselo.
Mém. Acad. Imp. Sci. St.-Petersbourg (7), xxxviii, No. 7, pp. 1-24, with 1 pl.
- Burckhardt, Rudolph.** 1895 A
Das Gebiss der Sauropsiden.
Schwalbe's Morpholog. Arbeiten, v, pp. 341-385.
Cites the literature of the subject.
- 1900 A
On *Hyperodapedon gordonii*.
Geol. Magazine (4), vii, pp. 486-492; 529-535, with pl. xix, and 3 text figs.
- Burmeister, Hermann.** 1864 A
Noticias preliminares sobre las diferentes especies de *Glyptodon* en el Museo Público de Buenos Aires.
Anales del Museo Púb. Buenos Aires, i, pp. 71-85.
- 1865 A
Bemerkungen über die Arten der Gattung *Glyptodon* im Museo Público de Buenos Aires.
Archiv für Anatomie, Physiol., und wissenschaft. Med., Jahrg., 1865, pp. 317-334, pls. vii, viii, A.
See also Ann. and Mag. Nat. Hist. (3), xiv, pp. 81-97.
- 1865 B
Hautpanzer bei *Myiodon*.
Archiv f. Anat. Physiol. u. wissenschaft. Med., Jahrg., 1865, pp. 334-336.
- Burmeister, Hermann**—Cont'd. 1865 C
Noticias preliminares sobre las diferentes especies de *Glyptodon* en el Museo Público de Buenos Aires.
Anales Mus. Púb. Buenos Aires, i, pp. 71-85.
- 1866 A
On *Glyptodon* and its allies.
Ann. and Mag. Nat. Hist. (3), xviii, pp. 299-304.
- 1866 B
Fauna Argentina, Primera parte, Mamíferos fósiles.
Anales Museo Púb. Buenos Aires, i, pp. 87-232, with pls. 5-8.
- 1867 A
Fauna Argentina. Primera parte. Mamíferos fósiles.
Anales Museo Púb., Buenos Aires, i, pp. 233-300, with pls. ix-xiv.
- 1870 A
Ueber das Becken von *Megatherium*.
Verhandl. k. k. zool.-bot. Gesellschaft Wien, xx, pp. 381-388.
- 1871 A
Ueber *Hoplophorus euphractus*.
Archiv f. Anat., Physiol. u. wissenschaft. Med., Jahrg. 1871, pp. 164-179, pl. vii A.
- 1871 B
Osteologische Notizen zur Kunde der Panzerthiere Süd-Amerikas.
Archiv f. Anat., Physiol. u. wissenschaft. Med., Jahrg. 1871, pp. 418-429, pl. xia; pp. 694-715, pl. xviii.
- 1871 C
On *Saurocetes argentinus*, a new type of *Zeuglodontidae*.
Ann. and Mag. Nat. Hist. (4), vii, pp. 51-55.
- 1872 A
Uebersicht der Glyptodonten.
Archiv für Naturgeschichte, xxxviii, i, pp. 250-264.
- 1873 A
Studien an *Megatherium americanum*.
Archiv f. Anat., Physiol., u. wissenschaft. Med., Jahrg. 1873, pp. 626-662, pl. xi.
- 1875 A
Die fossilen Pferde der Pampasformation, beschrieben von Dr. Herman Burmeister, Director des Museo Público in Buenos Aires. Eine im Auftrage der Provinzial-Regierung von Buenos Aires für die internationale Ausstellung zu Philadelphia verfasste Monographie.
Buenos Aires, 1875. Pp. 1-viii; 1-88, with pls. i-viii. Printed in both Spanish and German.
For supplementary volume see Burmeister, H., 1889 A.

- Burmeister, Hermann**—Cont'd. 1874 A
 Monografía de los Glyptodontes en el Museo Público de Buenos Aires.
 Anales Mus. Púb. Buenos Aires, -ii, pp. 1-412, with pls. i-xlii.
 In this monograph are described the genera *Panochthus*, *Hoplophorus*, *Glyptodon*, and *Daedicurus*.
 This monograph was issued in parts at intervals between 1870 and 1874.
- 1879 A
 Neue Beobachtungen an *Daedicurus giganteus*.
 Abhandl. k. Akad. Wissenschaften, Berlin, 1878, pp. 1-23, pls. i, ii.
- 1879 B
 Description physique de la République Argentine d'après des observations personnelles et étrangères. Traduit de l'allemand avec le concours de E. Daireaux. Tome troisième: Animaux vertébrés. Première partie: Mammifères vivants et éteints. Avec atlas.
 Buenos Ayres, 1879, pp. 1-556.
- 1883 A
 Beschreibung des Panzers von *Eutatus seguini*.
 Sitzungsber. k.-p. Akad. Wissensch., Berlin, Jahrg., 1883, pp. 1045-1063, pl. xiii.
- 1888 A
 Bericht über *Mastodon andium*.
 Sitzungsber. k.-p. Akad. Wissensch., Berlin, Jahrg., 1888, pp. 717-729.
- 1888 B
 Ein vollständiger Schädel des Megatherium.
 Sitzungsber. k.-p. Akad. Wissensch., Berlin, Jahrg., 1888, pp. 1291-1295.
- 1889 A
 Die fossilen Pferde der Pampasformation, beschrieben von Dr. Hermann Burmeister, Director des Museo Nacional in Buenos Aires. Nachtrags-Bericht; Eine im Auftrage der National-Regierung für die Ausstellung zu Paris verfasste Monographie.
 Buenos Aires, 1889, pp. i-vii; 1-65, with pls. ix-xii.
 Printed in both Spanish and German. A supplement to Burmeister H., 1875 A.
- Butts, Edward**. 1891 A
 Recently discovered footprints of the Amphibian age in the upper Coal-measure group of Kansas City, Mo.
 Kansas City Scientist, v, pp. 17-19, with 4 figs. in the text.
- Butts, Edward**—Continued. 1891 B
 Footprints of new species of amphibians in the upper Coal-measure group of Kansas City, Mo.
 Kansas City Scientist, v, p. 44, with 2 figs. in the text.
- “C. D.” 1838 A
 Bones of the mammoth.
 Amer. Jour. Sci., xxxviii, p. 201.
 Refers to finding of bones of mammoth in Rochester, N. Y.
- Calori, Luigi**. 1894 A
 Sulla composizione dei condili occipitali nelle varie classi di vertebrati e sull' omologia del terzo condilo occipitale dell' uomo con il condilo occipitale unico degli uccelli e dei rettili.
 Memoirie della R. Accad. Sci. Inst. Bologna (5), iv, pp. 283-296, with pl.
- Camper, Peter**. 1788 A
 Complementa varia Acad. Imper. Scient. Petropolitane communicanda, ad clar. ac celeb. Pallas.
 Nova Acta Acad. Sci. Imp. Petropolitane, ii, pp. 250-264, with pls. viii, ix.
 This paper is divided into the following heads: Præfatio, 250-252; De cranio bisontis fossili, 252-254; De bubalo giganteo, 254-257; De molaribus elephantorum giganteorum et eorum ossibus, 257-258; De dentibus Hippopotamorum giganteorum, 258; De alcebus giganteis Hiberniæ, 258-259; De ossibus mamonteis, 259-264.
- Cannon, Geo. L., jr.** 1888 A
 On the Tertiary *Dinosauria* found in Denver beds.
 Proc. Colorado Sci. Soc., iii, pp. 140-147.
 See also “Informal Notes” on pp. 190 and 215 of same volume. These “Informal Notes” were published in 1889.
- 1890 A
 Identification of a Dinosaur from the Denver group.
 Proc. Colorado Sci. Soc., iii, pp. 253-254.
 Refers to the finding of *Ornithomimus veloc.*
- Capellini, Giovanni**. 1884 A
 Il chelonio veronese (*Protosphargis veronensis*, Cap.), scoperto nel 1852 nel cretaceo supèrio presso Sant' Anna di Alfaedo in Valpolicella.
 Memorie R. Accad. Lincei (3), xviii, pp. 291-320, with pls. i-vi.
- Carpenter, W. M.** 1838 A
 Interesting fossils found in Louisiana.
 Amer. Jour. Sci., xxxiv, pp. 201-203, with 3 figs. of teeth of horse.

- Carpenter, W. M.**—Cont'd. 1839 A
Miscellaneous notices in Opelousas, Attakapas, etc.
Amer. Jour. Sci., xxxv, pp. 344-346.
- 1846 A
Remarks on some fossil bones recently brought to New Orleans from Tennessee and from Texas.
Amer. Jour. Sci. (2), i, pp. 244-250, with 4 figs. in the text.
- Carte, Alex., and Macalister, Alex.** 1869 A
On the anatomy of *Balanoptera rostratus*.
Philosoph. Trans. Roy. Soc. Lond., clviii, pp. 201-261, with pls. iv-vii.
- Carus, C. G.** 1847 A
Resultate geologischer, anatomischer, und zoölogischer Untersuchungen über das unter dem Namen *Hydrarchos* von Dr. A. C. Koch nach Europa gebrachte und in Dresden aufgestellte grosse fossile Skelett, in Verbindung mit H. B. Geinitz, A. F. Günther, und H. G. L. Reichenbach herausgegeben.
Pp. 16, and 8 pls.; folio, Dresden and Leipzig, 1847.
- 1849 A
Das Kopfskelet des *Zeuglodon hydrarchos*. Zum erstenmale nach einem vollständigen Exemplare beschrieben und abgebildet.
Nova Acta Acad. Cæs. Leop.-Carol. Nat. Cur., xxii, pp. 373-390, with pls. xxxix A and xxxix B.
- Cary, Austin.** 1892 A
A study in foot structure.
Jour. Morphology, vii, pp. 305-316, with pl. xviii, and 7 figs. in the text.
- Case, E. C.** 1897 A
Foramina perforating the cranial region of a Permian reptile and on a cast of its brain cavity.
Amer. Jour. Sci., (4) iii, pp. 321-326, with 4 figs. in the text.
A description of *Dimetrodon incisivus*.
- 1897 B
On the osteology and relationships of *Protostega*.
Jour. Morphology, xiv, pp. 21-55, with pls. iv-vi.
- 1898 A
The significance of certain changes in the temporal region of primitive *Reptilia*.
Amer. Naturalist, xxxii, pp. 69-74, with 2 figs. in the text.
- Case, E. C.**—Continued. 1898 B
The development and geological relations of the vertebrates. Part I, The fishes; Pt. II, Amphibia; Pt. III, Reptilia.
Jour. Geology, vi, pp. 393-416 (Fishes); pp. 500-523 (*Amphibia* and *Reptilia*).
- 1899 A
A redescription of *Pariotichus incisivus* Cope.
Zoolog. Bulletin, ii, pp. 231-245, with 7 text-figs.
- 1900 A
The vertebrates from the Permian bone bed of Vermilion County, Illinois.
Jour. Geology, viii, pp. 698-729, with pls. i-v.
The species of this paper were described by Cope, but few of them were figured. The original descriptions are reproduced and figures of many of them are given by Case. Several bones are figured without being identified. The species originally belonged to Gurley and are now owned by the University of Chicago.
- See also **Baur** and **Case**, and **Williston** and **Case**.
- Chadbourne, P. A.** 1871 A
The discovery of the skull of a musk-ox in Utah.
Amer. Naturalist, v, pp. 315-316.
Extract from Salt Lake Tribune, May 16, 1871.
- Chaloner, A. D.** 1843 A
Fossil bones of mastodon and elephant.
Proc. Acad. Nat. Sci. Phila., i, pp. 321-322.
- Chamberlin, Thomas C.** 1900 A
On the habitat of the early vertebrates.
Jour. Geology, viii, pp. 400-412.
- Champley, Robert.** 1864 A
The great auk.
Ann. and Mag. Nat. Hist. (3), xiv, pp. 235-236.
Contains a list of the specimens of this bird and of its skeletons and eggs in the various museums of the world.
See also note by Dr. J. E. Gray, on p. 319; by Dr. P. L. Sclater, on p. 320; and on p. 393, by A. von Pelzeln, all of the same volume.
- Chapman, E. J.** 1858 A
Mastodon remains. Morpeth, Canada West.
Canadian Jour. Industry, Science, and Art (2), iii, pp. 356-357.
Announces finding of remains of *M. ohioticus* (?) at place named above.
- Charlesworth, Edward.** 1837 A
Notice of the teeth of *Carcharias megalodon* in the Red Crag of Suffolk.
Mag. Natural History (2), i, pp. 225-227, with text fig.

Charlesworth, Edward—C't'd. 1846 A

On the occurrence of the *Mosasaurus* in the Essex chalk, and on the discovery of flint within the pulp cavities of the teeth.

Report Brit. Assoc. Adv. Sci., 15th meeting, Cambridge, 1845, p. 60.

Denies propriety of establishing *Leiodom.*

Charlton, O. C. 1890 A

On the occurrence of mammoth remains in Franklin County, Kans.

Trans. Kansas Acad. Sci., xii, p. 74.

Cheney, T. A. 1872 A

The Chatauqua mastodon.

Amer. Naturalist, vi, pp. 178-179.

Christie, W. J. 1856 A

Extract from a letter regarding the finding of mastodon bones near Shell River, British America.

Proc. Nat. Hist. Soc. Boston, v, pp. 265-266.

Clark, J. W. 1871 A

On the skeleton of a Narwhal (*Monodon monoceros*).

Proc. Zool. Soc. Lond., 1871, pp. 42-53, with 2 figs.

Clark, W. B. 1895 A

Contributions to the Eocene fauna of the middle Atlantic slope.

Johns Hopkins University circulars, xv, pp. 3-6.

A list of the species found, among which are 10 vertebrates.

1897 A

Eocene deposits of middle Atlantic slope.

Bull. U. S. Geol. Surv. No. 141, pp. i-vii; 1-167, pls. i-xi.

Descriptions of vertebrates, pp. 58-63, pls. vii, viii.

Clarke, John M. 1885 A

On the higher Devonian faunas of Ontario County, N. Y.

Bull. U. S. Geol. Surv., No. 16, pp. 1-80, pls. i-iii.

In this Bulletin are described the four new species of fishes *Dinichthys newberryi*, *Palaeoniscus devonicus*, *Acanthodes ? pristis*, and *Pristacanthus vetustus*.

1894 A

New or rare species of fossils from the horizons of the Livonia salt shaft.

Report State Geol. New York for 1893, ii, pp. 162-168, with pl. i and 3 figs. in the text.

Description and figures of *Coccosteus ? hal-modeus*.

1897 A

The stratigraphic and faunal relations of the Oneonta sandstones and

Clarke, John M.—Continued.

shales, the Ithaca and Portage groups in central New York.

Fifteenth Ann. Rep. State Geologist, for the year 1895, vol. i, pp. 31-81.

This paper appeared also in the 49th Ann. Report of the N. Y. State Museum.

Names *Dinichthys newberryi*, *Acanthodes pristis*, and *Palaeoniscus devonicus* as occurring in the Portage group.

Clarke, S. F. 1891 A

Embryology of the alligator.

Jour. Morphology, v, pp. 181-206, with pls. ix-xiii.

Claudius, —. 1867 A

Das Gehörorgan von *Rhytina stelleri*.

Mém. Acad. Imp. Sci. St. Pétersburg (7), xi, No. 5, pp. 1-14, with pls. i-iii.

Claypole, E. W. 1883 A

Note on a large fish plate from the Upper Chemung ? of northern Pennsylvania.

Proc. Amer. Philos. Soc., xx, pp. 664-666, with fig.

Describes and figures *Pterichthys rugosus*.

1884 A

Preliminary note on some fossil fishes recently discovered in the Silurian rocks of North America.

Amer. Naturalist, xviii, pp. 1222-1226.

New genus and species *Palaeaspis americana* and *P. bitruncata*.

1884 B

On some remains of fish from the Upper Silurian rocks of Pennsylvania.

The Geolog. Magazine (3), i, pp. 519-521.

1885 A

On some fish remains recently discovered in the Silurian rocks of Pennsylvania.

Proc. Amer. Assoc. Adv. Sci., 33d meeting, Phila., 1884, pp. 424-428.

Abstract of paper presented.

1885 B

On *Ctenacanthus* and *Gyracanthus* from the Chemung of Pennsylvania.

Proc. Amer. Assoc. Adv. Sci., 33d meeting, Phila., 1884, pp. 489-490. Abstract.

1885 C

On some remains of fish from the Upper Silurian rocks of Pennsylvania.

Report Brit. Assoc. Adv. Sci., 54th meeting, Montreal, 1884, pp. 733-734.

1885 D

On the recent discovery of Pteraspidian fish in the Upper Silurian rocks of North America.

Quart. Jour. Geol. Soc., xli, pp. 48-64, with 8 figs. in the text.

Claypole, E. W.—Continued. 1888 A
A letter concerning the collection of fossil fishes made at Berea, Ohio, by Dr. Wm. Clark.

Amer. Geologist, ii, pp. 62-64.

1890 A

Palæontological notes from Indianapolis (A. A. A. S.), *Pterichthys*, *Casitoroides*, etc.

Amer. Geologist, vi, pp. 255-260.

1891 A

Megalonyx in Holmes County, Ohio.
Amer. Geologist, vii, pp. 122-132; 149-153.

1892 A

A new gigantic Placoderm from Ohio.
Amer. Geologist, x, pp. 1-4, with 1 fig. in the text.

Describes *Gorgonichthys clarki*.

1892 B

Dentition of *Titanichthys* and its allies.

Amer. Geologist, x, p. 193.

Abstract of paper read before the Geological Society of America, 1892.

1892 C

The head of *Dinichthys*.

Amer. Geologist, x, pp. 199-207, with pls. vi-viii.

1892 D

On the structure of the American Pteraspidian, *Palæaspis* (Claypole), with remarks on the family.

Quart. Jour. Geol. Soc., xlviii, pp. 542-561, with 8 figs. in the text.

1893 A

A new Coccostean—*Coccosteus cuyahogæ*.

Amer. Geologist, xi, pp. 167-171, with 2 figs. in the text.

1893 B

The Cladodont sharks of the Cleveland shale.

Amer. Geologist, xi, pp. 325-331, with pls. vii, viii.

1893 C

Fins of *Palæaspis americana*.

Amer. Naturalist, xxvii, pp. 375-376.

Extract from paper in Quarterly Jour. Geol. Soc., 1892.

1893 D

The upper Devonian fishes of Ohio.

The Geol. Magazine (3), x, pp. 443-448, with 2 figs. in the text.

1893 E

The three great fossil Placoderms of Ohio.

Amer. Geologist, xii, pp. 89-99.

A popular description of *Dinichthys*, *Titanichthys*, and *Gorgonichthys*.

Claypole, E. W.—Continued. 1893 F
On three new species of *Dinichthys*.

Amer. Geologist, xii, pp. 275-279, with pl. xii, and 1 fig. in the text.

Descriptions of *D. lincolni*, *D. clarki*, and *D. gracilis*.

1893 G

The fossil fishes of Ohio.

Report Geol. Surv. of Ohio, vii, pp. 602-619, with pls. xxxviii-xliii.

1894 A

Cladodus ? magnificus, a new Sclerichian.

Amer. Geologist, xiv, pp. 137-140, with pl. v.

1894 B

On a new Placoderm, *Brontichthys clarki*, from the Cleveland shale.

Amer. Geologist, xiv, pp. 379-380, with pl. xii.

1894 C

Structure of the bone of *Dinichthys*.

Proc. Amer. Micros. Soc., xv, pp. 189-191, with 5 figs. in the text.

1895 A

On a new specimen of *Cladodus clarki*.

Amer. Geologist, xv, pp. 1-7, pls. i, ii.

1895 B

The Shaw mastodons.

Amer. Geologist, xv, pp. 325-326.

Notes the discovery of three individuals of the mastodon at Cincinnati, Ohio. Two of these possessed two lower incisors.

1895 C

Recent contributions to knowledge of the Cladodont sharks.

Amer. Geologist, xv, pp. 363-368.

1895 D

The Cladodonts of the upper Devonian of Ohio.

The Geol. Magazine (4), ii, p. 473.

See also Report Brit. Assoc. Adv. Sci., 1895, p. 694.

1895 E

The great Devonian Placoderms of Ohio.

The Geol. Magazine (4), ii, pp. 473-474.

See also Report Brit. Assoc. Adv. Sci., 1895, p. 695.

1895 F

Actinophorous clarki Newb.

Amer. Geologist, xvi, pp. 20-25, pl. ii.

1895 G

The oldest vertebrate fossil.

Nature, lii, p. 55.

This distinction is awarded to *Oncichus clintoni*.

1895 H

On the structure of the teeth of the Devonian Cladodont sharks.

Proc. Amer. Micros. Soc., xvi, pp. 191-195, with pls. i-iv, containing 7 figs.

- Claypole, E. W.**—Continued. 1896 A
A new *Titanichthys*.
Amer. Geologist, xvii, pp. 166-169, with pl. x.
Description and figs. of portions of a new species, *T. brevis*.
- 1896 B
The ancestry of the Upper Devonian Placoderms of Ohio.
Amer. Geologist, xvii, pp. 349-360.
- 1896 C
Dinichthys prentis-clarki.
Amer. Geologist, xviii, pp. 199-201, with pl. vii.
- 1896 D
On the teeth of *Mazodus*.
Trans. Amer. Micros. Soc., xviii, pp. 146-148, with pl. of 2 figs.
- 1896 E
On the structure of some Paleozoic spines from Ohio.
Trans. Amer. Micros. Soc., xviii, pp. 151-154, with pl. of 2 figs.
- 1897 A
Man and the *Megalonyx*.
Amer. Geologist, xx, pp. 52-54.
- Clift, William.** 1835 A
Some account of the remains of the *Megatherium* sent to England from Buenos Ayres, by Woodbine Parish, jr., esq., F. G. S., F. R. S.
Trans. Geol. Soc. Lond. (2), iii, pp. 437-450.
- Cocchi, Igino.** 1864 A
Monografia dei *Pharyngodopilidae*, nuova famiglia di pesci labroidi. Studi paleontologica.
Firenze, 1864, pp. 1-88, pls. ia-va.
- Coles, Henry.** 1853 A
On the skin of the *Ichthyosaurus*.
Quart. Jour. Geol. Soc. Lond., ix, pp. 79-82, with pl. v.
- Collett, John.** 1882 A
Recent extinction of the mastodon.
Amer. Naturalist, xvi, pp. 74-75.
Taken from Geological Report of Indiana for 1880.
- Collinge, Walter E.** 1893 A
The morphology of the sensory canal system in some fossil fishes.
Proc. Birmingham Philos. Soc., ix, pt. 1. Reprint, pp. 1-14, with pls. i, ii.
- 1895 A
The presence of scales in the integument of *Polyodon folium*.
Jour. Anat. and Physiol., xxix, pp. 485-487, with 2 figs. in the text.
- Conrad, T. A.** 1840 A
On the geognostic position of the *Zeuglodon*, or *Basilosaurus* of Harlan.
Amer. Jour. Sci. (1), xxxviii, pp. 381-382.
- 1869 A
Notes on American fossiliferous strata.
Amer. Jour. Sci. (2), xlvi, pp. 358-364.
- 1871 A
On some points connected with the Cretaceous and Tertiary of North Carolina.
Amer. Jour. Sci. (3), i, pp. 468-469.
- Conybeare, William D.** 1824 A
Additional notices on the fossil genera *Ichthyosaurus* and *Plesiosaurus*.
Trans. Geol. Soc. Lond. (2), i, pp. 103-123, with pls. xv-xxii.
- Cook, Geo. H.** 1885 A
Annual report of the State geologist for 1885.
Pp. 1-228.
On page 96 there is a list of 8 species of fossil tracks which have been found in New Jersey.
- Cooper, J. Hamilton.** 1843 A
On fossil bones found in digging the New Brunswick canal in Georgia.
Proc. Geol. Soc., Lond., iv, pp. 33-34.
- Cooper, William.** 1824 A
On the remains of the *Megatherium* recently discovered in Georgia.
Annals Lyc. Nat. Hist. of N. Y., i, pp. 114-124, pl. viii.
- 1828 A
Further discovery of fossil bones in Georgia, and remarks on their identity with those of the *Megatherium* of Paraguay.
Annals Lyc. Nat. Hist. of N. Y., ii, pp. 267-270.
Abstract in Edinb. New Philos. Jour. 1828, v, pp. 327-329.
- 1831 A
Notices of Big Bone Lick.
Monthly Amer. Jour. of Geol. and Nat. Sci., i, pp. 158-174; 205-217.
- 1833 A
A report on some fossil bones of the *Megalonyx* from Virginia, with a notice of such parts of the skeleton of this animal as have been hitherto discovered, and remarks on the affinities which they indicate.
Annals Lyc. Nat. Hist. N. Y., iii, pp. 166-173.

- Cooper, William, Smith, J. A., and DeKay, J. E.** 1831 A
Report of Messrs. Cooper, J. A. Smith, and DeKay to the Lyceum of Natural History on a collection of fossil bones disinterred at Big Bone Lick, Kentucky, in September, 1830, and recently brought to New York.
Reprinted in Edinburgh New Philos. Journal, xi, pp. 352-355, 1831, Amer. Jour. Sci., xx, pp. 370-372, and Monthly Amer. Jour. Geol., i, pp. 43-44.
- Cope, E. D.** 1864 A
On the characters of the higher groups of *Reptilia Squamata*, and especially of the *Diploglossa*.
Proc. Acad. Nat. Sci. Phila., 1864, pp. 224-231.
- 1865 A
On *Amphibamus grandiceps*, a new batrachian from the Coal-measures.
Proc. Acad. Nat. Sci. Phila., 1865, pp. 134-137.
- 1866 A
On the discovery of the remains of a gigantic Dinosaur in the Cretaceous of New Jersey.
Proc. Acad. Nat. Sci. Phila., 1866, pp. 275-279.
- 1866 B
On the discovery of the remains of a gigantic Dinosaur in the Cretaceous of New Jersey.
Amer. Jour. Sci. (2), xlii, p. 425. Abstract from Proc. Phila. Acad., 1866, pp. 275-279.
Same as preceding.
- 1866 C
Supplement to the description of vertebrates.
Geol. Surv. Illinois, A. H. Worthen, director, ii, pp. 135-141, pl. xxxii, and 1 woodcut.
This paper is supplementary to "Newberry and Worthen, 1866 A."
- 1866 D
Observations on extinct vertebrates of the Mesozoic red sandstone.
Proc. Acad. Nat. Sci. Phila., 1866, pp. 249-250.
Remarks on *Rhytidodon*, *Clepsisaurus*, and *Mastodonsaurus durus*.
- 1866 E
[Remarks on *Laelaps*.]
Proc. Acad. Nat. Sci. Phila., pp. 316-317.
- 1866 F
On the structures and distribution of the genera of the arciferous *Anura*.
Jour. Acad. Nat. Sci. Phila. (2), vi, pp. 67-112, pl. 25.
- Cope, E. D.—Continued.** 1866 G
Communication in regard to the Mesozoic sandstone of Pennsylvania.
Proc. Acad. Nat. Sci. Phila., 1866, p. 290.
Notes the finding of *Pterodactylus longispinis*, afterwards described as *Rhabdopelix longispinis*.
- 1866 H
Third contribution to the history of the *Balaenidae* and *Delphinidae*.
Proc. Acad. Nat. Sci. Phila., xviii, pp. 293-300.
In this paper Harlan's *Delphinus calvertensis* is assigned to *Pontoporia*.
- 1867 A
On *Euclastes*, a genus of extinct *Chelonidae*.
Proc. Acad. Nat. Sci. Phila., pp. 39-42.
- 1867 B
[Descriptions of *Eschrichtius cephalus*, *Rhabdosteus latiradix*, *Squalodon atlanticus*, and *S. mento*.]
Proc. Acad. Nat. Sci. Phila., 1867, pp. 131-132.
- 1867 C
An addition to the vertebrate fauna of the Miocene period, with a synopsis of the extinct *Cetacea* of the United States.
Proc. Acad. Nat. Sci. Phila., 1867, pp. 138-156.
Species collected in Charles County, Md.
- 1867 D
[Account of extinct reptiles which approach birds.]
Proc. Acad. Nat. Sci. Phila., 1867, pp. 234-235.
- 1867 E
The fossil reptiles of New Jersey.
Amer. Naturalist, i, pp. 23-30.
- 1868 A
On a new large Enaliosaur.
Proc. Acad. Nat. Sci. Phila., 1868, pp. 92-93.
Describes *Elasmosaurus platyurus*.
- 1868 B
On the origin of genera.
Proc. Acad. Nat. Sci. Phila., 1868, pp. 242-300.
- 1868 C
On the genus *Laelaps*.
Amer. Jour. Sci. (2), xlvi, pp. 415-417.
- 1868 D
Note on the fossil reptiles near Fort Wallace.
Page 68 of John L. Le Conte's "Notes on the geology of the survey for the extension of the Union Pacific Railway, E. D., from the Smoky Hill River, Kansas, to the Rio Grande," Philadelphia, Feb., 1868.
Contains description of *Elasmosaurus platyurus* and mention of *Discosaurus carinatus* Cope.

Cope, E. D.—Continued. 1868 E
[Description of new genus and species of *Chelonidæ*, *Osteopygis emarginatus*.]

Proc. Acad. Nat. Sci. Phila., 1868, p. 147.

1868 F
[Remarks on *Palæophis littoralis* Cope.]

Proc. Acad. Nat. Sci. Phila., 1868, p. 147.

1868 G
[Remarks on extinct *Cetacea* from the Miocene of Maryland.]

Proc. Acad. Nat. Sci. Phila., 1868, pp. 159, 160.

1868 H
[Remarks on *Clidastes iguanavus*, *Necroportheus validus*, and *Elasmosaurus*.]

Proc. Acad. Nat. Sci. Phila., 1868, p. 181.

1868 I
Second contribution to the history of the *Vertebrata* of the Miocene period of the United States.

Proc. Acad. Nat. Sci. Phila., 1868, pp. 184-194.

1868 J
Synopsis of the extinct *Batrachia* of North America.

Proc. Acad. Nat. Sci. Phila., 1868, pp. 208-221.

1868 K
On some Cretaceous *Reptilia*.

Proc. Acad. Nat. Sci. Phila., 1868, pp. 233-242.

1868 L
On the origin of genera.

Proc. Acad. Nat. Sci. Phila., 1868, pp. 242-300.

1868 M
[Observations on some extinct reptiles.]

Proc. Acad. Nat. Sci. Phila., 1868, p. 313.

1869 A
On the reptilian orders *Pythonomorpha* and *Streptosauria*.

Proc. Boston Soc. Nat. Hist., xii, pp. 250-266.

1869 B
Synopsis of the extinct *Reptilia* found in the Mesozoic and Tertiary strata of New Jersey.

Appendix B of Geology of New Jersey, George H. Cook, State geologist, Newark, 1868, pp. 733-742.

The letter of the State geologist to the governor (page v.) shows that this volume could not have been issued before 1869.

1869 C
[Remarks on fossil reptiles.]

Proc. Amer. Philos. Soc., xi, p. 16.

Cope, E. D.—Continued. 1869 D
[Remarks on fossil reptiles, *Clidastes propython*, *Polycotylus latipinnis*, *Ornithotarsus immanis*.]

Proc. Amer. Philos. Soc., xi, p. 117.

Reprint in Amer. Jour. Sci. (2), xlviii, p. 278.

Noticed in The Geolog. Magazine, vol. vi, (1869), p. 476, and vol. vii (1870), p. 427.

1869 E
Synopsis of the extinct *Mammalia* of the cave formations in the United States, with observations on some *Myriopoda* found in and near the same, and on some extinct mammals of the caves of Anguilla, W. I., and of other localities.

Proc. Amer. Philos. Soc., xi, pp. 171-192, with pls. iii-v.

Noticed in Jour. de Zoologie, i, pp. 168-169.

1869 F
Second addition to the history of the fishes of the Cretaceous of the United States.

Proc. Amer. Philos. Soc., xi, pp. 240-244.

1869 G
Third contribution to the fauna of the Miocene period of the United States.

Proc. Acad. Nat. Sci. Phila., 1869, pp. 6-12.

1869 H
[Remarks on *Holops brevispinus*, *Ornithotarsus immanis*, and *Macrosaurus pro-riger*.]

Proc. Acad. Nat. Sci. Phila., 1869, p. 123.

1869 I
[Remarks on *Eschrichtius polyporus*, *Hypsibema crassicauda*, *Hadrosaurus tripus*, and *Polydectes biturgidus*.]

Proc. Acad. Nat. Sci. Phila., 1869, p. 192.

1869 J
Remarks on fossils from limestone caves in Virginia.

Proc. Acad. Nat. Sci. Phila., 1869, p. 3.

1869 K
The fossil reptiles of New Jersey.

Amer. Naturalist, iii, pp. 84-91, pl. ii; continued from Amer. Naturalist, i, p. 30.

1869 L
Description of some extinct fishes previously unknown.

Proc. Boston Soc. Nat. Hist., xii, pp. 310-317.

Cope, E. D.—Continued. 1869 M

Synopsis of the extinct *Batrachia*,
Reptilia, and *Aves* of North America.

Trans. Amer. Phil. Soc., xiv, pp. i-viii, 1-252,
with pls. i-xiv, and 55 woodcuts in the text.

A synopsis appeared in Jour. de Zoologie, i,
pp. 182-187, 381-387, 508-510, with pls. xi. Of
this memoir only pp. 1-104 were issued in the
year 1869; pp. 105-234 appeared in April, 1870,
while the remainder was issued in December,
1870. The imprint of the volume is December,
1871.

1869 N

Synopsis of the extinct *Mammalia* of
New Jersey.

Appendix C of Geology of New Jersey, George
H. Cook, State geologist, Newark, 1868, pp. 739-
742.

See remark under Cope, 1869, B.

1869 O

On two new genera of extinct *Cetacea*.

Canadian Naturalist, iv, pp. 320-321.

Only *Anoplonassa forcipata* is described in
this extract from a Boston newspaper.

1870 A

On the *Megadactylus polyzelus* of
Hitchcock.

Amer. Jour. Sci. (2), xlix, pp. 390-392.

Extract from Cope's "Extinct Reptilia and
Aves." Reprinted in Ann. and Mag. Nat. Hist.
(4), vol. v, pp. 454-455.

1870 B

On *Elasmosaurus platyrus*.

Amer. Jour. Sci. (2), i, pp. 140-141.

1870 C

Additional note on *Elasmosaurus*.

Amer. Jour. Sci. (2), i, pp. 268-269.

1870 D

On some *Reptilia* of the Cretaceous
formation of the United States.

Proc. Amer. Philos. Soc., xi, pp. 271-274.

1870 E

Verbal communication [at meeting of
the Amer. Philos. Soc., Feb. 18, 1870.]

Proc. Amer. Philos. Soc., xi, p. 274.

1870 F

Fourth contribution to the history of
the fauna of the Miocene and Eocene
periods of the United States.

Proc. Amer. Philos. Soc., xi, pp. 285-294.

1870 G

On *Adocus*, a genus of Cretaceous
Emydidae.

Proc. Amer. Philos. Soc., xi, pp. 295-298.

Cope, E. D.—Continued. 1870 H

Observations on the fishes of the
Tertiary shales of Green River, Wyo-
ming Territory.

Proc. Amer. Philos. Soc., xi, pp. 380-384.

1870 I

Observations on the *Reptilia* of the
Triassic formations of the Atlantic
regions of the United States.

Proc. Amer. Philos. Soc., xi, pp. 444-446.

Reprinted in Ann. Mag. Nat. Hist., 1870, vi,
pp. 498-500.

1870 J

[Statements communicated regarding

Liodon perlatus.]

Proc. Amer. Philos. Soc., xi, pp. 497-498.

1870 K

[Remarks on *Adocus syntheticus* and

Laelaps aquilunguis.]

Proc. Amer. Philos. Soc., xi, p. 515.

1870 L

On the *Sauroidontidae*.

Proc. Amer. Philos. Soc., xi, pp. 529-538.

Abstract of in Amer. Naturalist, iv, p. 695.

1870 M

On the fishes of a fresh-water Tertiary
in Idaho, discovered by Capt. Clarence
King.

Proc. Amer. Philos. Soc., xi, pp. 538-547.

1870 N

On the *Adocidae*.

Proc. Amer. Philos. Soc., xi, pp. 547-553.

1870 O

On some species of *Pythonomorpha*
from the Cretaceous beds of Kansas and
New Mexico.

Proc. Amer. Philos. Soc., xi, pp. 574-584.

1870 P

Note on *Saurocephalus*, Harlan.

Proc. Amer. Philos. Soc., xi, p. 608.

Abstract in Amer. Jour. Sci. (3), i, p. 386,
1871.

1870 Q

[Observations on fossil reptiles from
Kansas.]

Proc. Acad. Nat. Sci. Phila., 1870, p. 132.

1870 R

Discovery of a huge whale in North
Carolina.

Amer. Naturalist, iv, p. 128.

1870 S

Reptilia of the Triassic formations of
the United States.

Amer. Naturalist, iv, pp. 562-563.

Cope, E. D.—Continued.

1870 T

Review of G. A. Maaack's "Die bis jetzt bekannten Schildkröten u. d. bei Kelheim u. Hannover neu aufgefundenen ältesten Arten derselben."

Amer. Jour. Science (2) 1. pp. 136-139.

This paper contains a list of species of American turtles known at that date.

1871 A

[Remarks on new fossil reptiles from western Kansas.]

Proc. Acad. Nat. Sci. Phila., 1871, pp. 297-298.

Names are given of certain fossils, but no adequate descriptions.

1871 B

On the homologies of some of the cranial bones of the *Reptilia*, and on the systematic arrangement of the class.

Proc. Amer. Assoc. Adv. Science, 19th meeting, Troy, 1870, pp. 194-247, with 24 figs. in text.

Notice of in Ann. and Mag. Nat. Hist. (4), vol. vii, pp. 67-68.

1871 C

On the extinct tortoises of the Cretaceous of New Jersey.

Amer. Naturalist, v, pp. 562-564.

1871 D

On the fossil reptiles and fishes of the Cretaceous rocks of Kansas.

U. S. Geol. Surv. of Wyoming and portions of contiguous Territories, 2d [4th] annual report, F. V. Hayden, U. S. Geologist, Washington, 1871, pp. 385-424.

1871 E

On the fishes of the Tertiary shales of Green River, Wyoming Territory.

U. S. Geol. Surv. of Wyoming and portions of contiguous Territories for 1870, 2d [4th] annual report, F. V. Hayden, U. S. Geologist, pp. 425-431.

1871 F

The Port Kennedy bone cavern.

Proc. Amer. Philos. Soc., xi, p. 15.

1871 G

Supplement to the "Synopsis of the extinct *Batrachia* and *Reptilia* of North America."

Proc. Amer. Philos. Soc., xii, pp. 41-52.

1871 H

On the occurrence of fossil *Cobitidæ* in Idaho.

Proc. Amer. Philos. Soc., xii, p. 55.

Discusses position of the genus *Diastichus*, which was afterwards put among the *Cyprinidæ*.

Cope, E. D.—Continued.

1871 I

Preliminary report on the *Vertebrata* discovered in the Port Kennedy bone cave.

Proc. Amer. Philos. Soc., xii, pp. 73-102, with 20 figs. in the text.

1871 J

Note of some Cretaceous *Vertebrata* in the State Agricultural College of Kansas, U. S. A.

Proc. Amer. Philos. Soc., xii, pp. 168-170.

1871 K

[Letter to Professor Lesley giving an account of a journey in the valley of the Smoky Hill River, in Kansas.]

Proc. Amer. Philos. Soc., xii, pp. 174-176.

1871 L

Observations on the extinct *Batrachian* fauna of the Carboniferous of Linton, Ohio.

Proc. Amer. Philos. Soc., xii, p. 177.

1871 M

Observations on the distribution of certain extinct *Vertebrata* in North Carolina.

Proc. Amer. Philos. Soc., xii, pp. 210-216.

1871 N

Catalogue of the *Pythonomorpha* found in the Cretaceous strata of Kansas.

Proc. Amer. Philos. Soc., xii, pp. 264-287.

1871 O

[Observations on *Sauropus remex* and *Estrocephalus amphiuminus*.]

Proc. Acad. Nat. Sci. Phila., 1871, p. 53.

1871 P

Cave mammals in Pennsylvania.

Amer. Naturalist, v, p. 58.

Refers to the finding of bones in Port Kennedy cave.

1872 A

Bathmodon, a new genus of fossil mammals.

Amer. Jour. Sci. (3), iii, p. 224.

Relative to paper read before Amer. Philos. Soc. (Cope, E. D., 1872 J.), correcting date.

1872 B

Synopsis of the species of *Chelydrinae*.

Proc. Acad. Nat. Sci. Phila., 1872, pp. 22-29.

1872 C

Observations on the systematic relations of the fishes.

Proc. Amer. Assoc. Adv. Science, 20th meeting, Indianapolis, 1871, pp. 317-343.

See also Amer. Naturalist, v. pp. 579-593; Ann. and Mag. Nat. Hist. (4), ix, pp. 155-168; Trans. Amer. Philos. Soc., xiv, pp. 445-461.

- Cope, E. D.—Continued.** 1872 D
On the extinct tortoises of the Cretaceous of New Jersey.
Proc. Amer. Assoc. Adv. Science, 20th meeting, Indianapolis, 1871, pp. 344-345.
Abstract of Cope, 1871 D.
-
- 1872 E
Third account of new *Vertebrata* from the Bridger Eocene of Wyoming Territory.
Proc. Amer. Philos. Soc., xii, pp. 469-472 (1873).
Issued Aug. 7, 1872, as Pal. Bull. No. 3; reprinted in Proc. Amer. Philos. Soc., Jan., 1873.
-
- 1872 F
On the geology and palæontology of the Cretaceous strata of Kansas.
U. S. Geol. Surv. of Montana and portions of adjacent Territories; 5th annual report, F. V. Hayden, U. S. Geologist, Washington, D. C., 1872, pp. 318-349.
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- 1872 G
On the vertebrate fossils of the Wasatch strata.
U. S. Geol. Surv. of Montana and portions of adjacent Territories; 5th annual report, F. V. Hayden, U. S. Geologist, Washington, 1872; pp. 350-353.
-
- 1872 H
On a new Testudinate from the chalk of Kansas.
Proc. Amer. Philos. Soc., xii, pp. 308-310.
Describes *Cynocercus incisivus*.
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- 1872 I
On the families of fishes of the Cretaceous formation in Kansas.
Proc. Amer. Philos. Soc., xii, pp. 327-357.
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- 1872 J
On *Bathmodon*, an extinct genus of ungulates.
Proc. Amer. Philos. Soc., vii, pp. 417-420.
-
- 1872 K
On two new Ornithosaurians from Kansas.
Proc. Amer. Philos. Soc., xii, pp. 420-422.
Ornithochirus umbrosus and *O. harpyia* are described.
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- 1872 L
A description of the genus *Protostega*, a form of extinct *Testudinata*.
Proc. Amer. Philos. Soc., xii, pp. 422-433.
-
- 1872 M
Description of some new *Vertebrata* from the Bridger group of the Eocene.
Proc. Amer. Philos. Soc., xii, pp. 460-465.
Issued as Pal. Bull. No. 1, July 29, 1872; reprinted in Proc. Amer. Phil. Soc., January, 1873.
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- Cope, E. D.—Continued.** 1872 N
Second account of new *Vertebrata* from the Bridger Eocene.
Proc. Amer. Philos. Soc., xii, pp. 466-468.
This forms Pal. Bull. No. 2, and was issued Aug. 3, 1872; reprinted in Proc. Amer. Philos. Soc., 1873, January (See Cope, 1873 V).
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- 1872 O
On a new genus of *Pleurodira* from the Eocene of Wyoming.
Proc. Amer. Philos. Soc., xii, pp. 472-477.
Besides the new genus of Pleurodiran turtle *Notomorphia*, with 3 species, Cope here describes the perissodactyle *Notharctus vasacciensis*.
-
- 1872 P
On the Tertiary coal and fossils of Osino, Nevada.
Proc. Amer. Philos. Soc., xii, pp. 478-481.
-
- 1872 Q
On the existence of *Dinosauria* in the transition beds of Wyoming.
Proc. Amer. Philos. Soc., xii, pp. 481-483 (1873).
This forms Pal. Bull. No. 4, published Aug. 12, 1872; reprinted in Amer. Philos. Soc. Proc., Jan., 1873.
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- 1872 R
Notices of new *Vertebrata* from the upper waters of Bitter Creek, Wyoming Territory.
Proc. Amer. Philos. Soc., xii, pp. 483-486 (1873).
This forms Pal. Bull. No. 6, published Aug. 20, 1872; reprinted Jan., 1873, in Proc. Amer. Philos. Soc. (See Cope, 1873 V.)
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- 1872 S
Second notice of extinct vertebrates from Bitter Creek, Wyoming.
Proc. Amer. Philos. Soc., xii, pp. 487-488 (1873).
Published in part Aug. 22, 1872, as Pal. Bull. No. 7; reprinted in Proc. Amer. Philos. Soc., Jan., 1873. (See Cope, 1873 V.) The description of *Anaptomorphus æmulus* forms Pal. Bull. No. 8, Oct., 1872, *vide* Cope, 1873 V.
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- 1872 T
On the dentition of *Metalophodon*.
Proc. Amer. Philos. Soc., xii, pp. 542-545.
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- 1872 U
On a new vertebrate genus from the northern part of the Tertiary basin of Green River.
Proc. Amer. Philos. Soc., xii, p. 554.
Issued also as Pal. Bull. No. 8, Oct. 12, 1872.
Describes *Anaptomorphus æmulus*.
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- 1872 V
Descriptions of new extinct reptiles from the upper Green River Eocene basin, Wyoming.
Proc. Amer. Philos. Soc., xii, pp. 554-555 (1873).
This constitutes Pal. Bull. No. 9, published Oct., 1872; reprinted Jan., 1873, *vide* Cope, 1873 V.

- Cope, E. D.—Continued.** 1872 W
Telegram describing extinct proboscidi-
ans from Wyoming.
Palæontological Bull. No. 5.
With conjectural corrections of specific
names. Published Aug. 1, 1872, *vide* Cope, 1873
V. Reprinted, with corrections, in Proc. Amer.
Philos. Soc., xii, p. 580. (Cope, E. D., 1872 II.)
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- 1872 X
[Description of *Holops pneumaticus*.
Proc. Acad. Nat. Sci. Phila., 1872, pp. 11-12.]
-
- 1872 Y
List of the *Reptilia* of the Eocene
formation of New Jersey.
Proc. Acad. Nat. Sci. Phila., 1872, pp. 14-18.
-
- 1872 Z
On an extinct whale from California.
Proc. Acad. Nat. Sci. Phila., 1872, pp. 29-30.
Describes *Eschrichtius davidsonii*.
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- 1872 AA
[Description of *Bathmodon radians*.]
Proc. Acad. Nat. Sci. Phila., 1872, p. 38.
Reprinted in Amer. Jour. Sci. (3), iv, pp.
238-239; Amer. Naturalist, vi, p. 438.
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- 1872 BB
[Description of *Plesiosaurus gulo* and
of the turtle afterwards named *Toxochelys latiremis*.]
Proc. Acad. Nat. Sci. Phila., 1872, pp. 127-129.
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- 1872 CC
[Remarks on discoveries recently
made by Prof. O. C. Marsh.]
Proc. Acad. Nat. Sci. Phila., 1872, pp. 140-141.
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- 1872 DD
Remarks on *Mastodon* from New
Mexico.
Proc. Acad. Nat. Sci. Phila., 1872, p. 142.
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- 1872 EE
Remarks on geology of Wyoming,
and on saurodont fishes from Kansas.
Proc. Acad. Nat. Sci. Phila., 1872, pp. 279-281.
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- 1872 FF
The geological age of the coal of
Wyoming.
Amer. Naturalist, vi, pp. 669-671.
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- 1872 GG
Food of *Plesiosaurus*.
Amer. Naturalist, vi, p. 439.
-
- 1872 HH
The Eocene genus *Synoplotherium*.
Amer. Naturalist, vi, p. 695.
-
- 1872 II
Notice of new proboscidi-ans from the
Eocene of southern Wyoming.
Proc. Amer. Philos. Soc., xii, p. 580 (1873).
Followed by a note of the secretary, correct-
ing errors in the original, which was issued as
Pal. Bull. No. 5. (Cope, E. D., 1872 W.)
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- Cope, E. D.—Continued** 1872 JJ
Carboniferous reptiles of Ohio.
Amer. Naturalist, vi, p. 46.
-
- 1872 KK
The proboscidi-ans of the American
Eocene.
Amer. Naturalist, vi, pp. 773-774.
The group of which *Eobasileus cornutus* is
type.
-
- 1872 LL
The armed *Metalophodon*.
Amer. Naturalist, vi, pp. 774-775.
Describes *M. armatus*.
-
- 1872 MM
The fish-beds of Osino, Nevada.
Amer. Naturalist, vi, pp. 775-776.
Refers to *Amyzon mentale* and *Trichophanes
hians*.
-
- 1873 A
Note on the Cretaceous of Wyoming.
Amer. Jour. Sci. (3), v, pp. 230-231.
Slip from the "Proc. Phil. Soc., Philadel-
phia," published on Feb. 7. Followed by re-
marks by "Eds." The original not found in
the Proc. Amer. Philos. Soc., Phila.
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- 1873 B
On the new perissodactyles from the
Bridger Eocene.
Proc. Amer. Philos. Soc., xiii, pp. 35-36.
Also issued as Pal. Bull. No. 11.
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- 1873 C
On some new extinct *Mammalia* from
the Tertiary of the Plains.
Palæont. Bulletin No. 14, pp. 1-2.
Describes *Elurodon mustelinus* and *Acerothe-
rium megalodus*.
-
- 1873 D
Fourth notice of extinct *Vertebrata*
from the Bridger and the Green River
Tertiaries.
Palæont. Bulletin No. 17, pp. 1-4. "Oct. 25,
1873." (Cope.)
-
- 1873 E
On the extinct *Vertebrata* of the
Eocene of Wyoming, observed by the
expedition of 1872, with notes on the
geology.
U. S. Geol. Surv. Terr. for 1872, 6th annual
report, F. V. Hayden, U. S. Geologist, Washing-
ton, D. C., 1873, pp. 645-649, pls. i-vi.
-
- 1873 F
On the short-footed *Ungulata* of the
Eocene of Wyoming.
Proc. Amer. Philos. Soc., xiii, pp. 38-74.
For extract see Jour. de Zoologie, ii, 1873, pp.
168-184, pl. vii, followed by remarks by Paul
Gervais.
-
- 1873 G
On the flat-clawed *Carnivora* of the
Eocene of Wyoming.
Proc. Amer. Philos. Soc., xiii, pp. 198-209.

- Cope, E. D.—Continued.** 1873 H
On the osteology of the extinct tapi-
roid *Hyrachyus*.
Proc. Am. Philos. Soc., xiii, pp. 212-224.
- 1873 I
[Remarks on additional specimens
of *Toxochelys latiremis*.]
Proc. Acad. Nat. Sci. Phila., 1873, p. 10.
- 1873 J
Observations on the structure and
systematic position of the genus *Basi-
leus* Cope.
Proc. Acad. Nat. Sci. Phila., 1873, pp. 10-12.
- 1873 K
[Remarks on *Eobasilidæ* and *Bath-
modontidæ*.]
Proc. Acad. Nat. Sci. Phila., 1873, p. 102.
- 1873 L
[Remarks on a fossil skull of *Sus
scropha*.]
Proc. Acad. Nat. Sci. Phila., 1873, p. 207.
- 1873 M
Some extinct turtles from the Eocene
strata of Wyoming.
Proc. Acad. Nat. Sci. Phila., 1873, pp. 277-279.
Descriptions of *Trionyx heteroglyptus* and
Plastomenus thomasi.
- 1873 N
On two new species of *Sauroidontidæ*.
Proc. Acad. Nat. Sci. Phila., 1873, pp. 337-339.
Describes *Portheus lestrio* and *P. gladius* and
the new genus *Daptinus*.
- 1873 O
On some new *Batrachia* and fishes
from the Coal-measures of Linton, Ohio.
Proc. Acad. Nat. Sci. Phila., 1873, pp. 340-343.
- 1873 P
On the types of molar teeth.
Proc. Acad. Nat. Sci. Phila., 1873, p. 371.
- 1873 Q
[Remarks on fishes from the Coal-
measures of Linton, Ohio.]
Proc. Acad. Nat. Sci. Phila., 1873, pp. 417-419.
- 1873 R
[On *Menotherium lemurinum*, *Hypiso-
dus minimus*, *Hypertragulus calcaratus*,
H. tricostatus, *Protohippus*, and *Pro-
camelus occidentalis*.]
Proc. Acad. Nat. Sci., Phila., 1873, pp. 419-420.
- 1873 S
Second notice of extinct *Vertebrata*
from the Tertiary of the Plains.
Palæont. Bull. No. 15, pp. 1-6.
"Issued Aug. 20, 1873." (Cope.)
- Cope, E. D.—Continued.** 1873 T
Third notice of extinct *Vertebrata*
from the Tertiary of the Plains.
Palæont. Bull. No. 16, pp. 1-8.
"Published Aug. 20, 1873." (Cope.)
- 1873 U
On some Eocene mammals obtained
by Hayden's Geological Survey of 1872.
Palæont. Bull. No. 12, pp. 1-6.
Issued privately March 8, 1873. Not re-
printed.
- 1873 V
Palæontological Bulletin. Prelimi-
nary.
Pp. 1-2. Gives titles and dates of publica-
tion of Palæontological Bulletins Nos. 1-13.
- 1873 W
The gigantic mammals of the genus
Eobasilæus.
Amer. Naturalist, vii, pp. 157-160.
- 1873 X
On some of Professor Marsh's criti-
cisms.
Amer. Naturalist, vii, pp. 290-299.
Forms, with slight changes, Palæont. Bull.
No. 13.
- 1873 Y
Proboscidiæ of the American
Eocene. Correction.
Amer. Naturalist, vii, p. 49.
Makes a correction regarding the teeth of
Eobasilæus cornutus.
- 1873 Z
The *Eobasilæus* again.
Amer. Naturalist, vii, p. 181.
- 1873 AA
On Professor Marsh's criticisms.
Amer. Naturalist, vii. Appendix to July
number, p. 1.
This communication contains only eight
lines.
- 1873 BB
On the tusk of *Loxolophodon cornutus*.
Amer. Naturalist, vii, p. 315.
- 1873 CC
Synopsis of new *Vertebrata* from the
Tertiary of Colorado, obtained during
the summer of 1873.
Pp. 1-19. Washington, Government Print-
ing Office, Oct., 1873.
On the title page this paper is said to be
extracted from the 7th Annual Report of the
U. S. Geol. Surv. Terr., but it does not appear
in that volume.

Cope, E. D.—Continued. 1873 DD
Some remarkable and gigantic animals.

The Independent, New York, Oct. 30, 1873.

Contains reports of the meeting of the Amer. Assoc. Adv. Sci. at Portland, Me. *Miobasileus*, *Symborodon*, and *Eobasileus* are referred to. *Symborodon acer*, *S. bucco*, *S. altirostris*, *S. heloceros* are more or less fully described.

1874 A

On some extinct types of horned perissodactyles.

Proc. Amer. Assoc. Adv. Science, 22d meeting, Portland, 1873, pp. 108-109.

Reprinted in Ann. and Mag. Nat. Hist. (4), xiii, pp. 405-406.

Describes *Symborodon torvus*, *Miobasileus ophryas*, *Symborodon acer*, and *S. heloceros*.

1874 B

Report on the vertebrate palæontology of Colorado.

Annual Report Geol. and Geog. Surv. Territories for 1873, F. V. Hayden, U. S. Geologist, Washington, D. C., 1874, pp. 427-533, pls. i-viii.

Chapter I. Introduction, pp. 429-430. II. the Cretaceous period, pp. 431-456. III. The Eocene period, pp. 456-461. IV. The Miocene period, pp. 461-518. V. The Loup Fork epoch, pp. 518-532.

An abstract of this paper appeared in Jour. de Zoologie, iv, 1875, pp. 354-359, with a list of the species described.

1874 C

Review of the *Vertebrata* of the Cretaceous period found west of the Mississippi River. Sec. I. On the mutual relations of the Cretaceous and Tertiary formations of the West. Sec. II. List of species of *Vertebrata* from the Cretaceous formations of the West.

Bull. U. S. Geol. and Geog. Surv. of the Terrs., i, No. 2, 1874, pp. 3-48.

1874 D

Supplementary notices of fishes from the fresh-water Tertiaries of the Rocky Mountains.

Bull. U. S. Geol. and Geog. Surv. of the Terrs., i, No. 2, 1874, pp. 49-51.

1874 E

Abstract of remarks at the meeting of the Amer. Philos. Soc., Jan. 16, 1874.

Proc. Amer. Philos. Soc., xiv, p. 110.

On *Poebrotherium*, etc.

1874 F

[Observations on age of lignite and other formations of the West.]

Proc. Acad. Nat. Sci. Phila., 1874, pp. 12-13.

Cope, E. D.—Continued. 1874 G
Remarks on *Symborodon*, *Titanotherium*, and *Eobasileus*.

Proc. Acad. Nat. Sci. Phila., 1874, pp. 89-90.

1874 H

Synopsis of result of work in connection with Hayden's U. S. Geological Survey during 1873.

Proc. Acad. Nat. Sci. Phila., 1874, pp. 116-117.

1874 I

Notes on the Santa Fé marls and some of the contained vertebrate fossils.

Proc. Acad. Nat. Sci. Phila., 1874, pp. 147-152.

Also in Palæont. Bull. No. 18.

1874 J

On a new mastodon and rodent.

Proc. Acad. Nat. Sci. Phila., 1874, pp. 221-223.

1874 K

On the characters of *Symborodon*.

Proc. Acad. Nat. Sci. Phila., 1874, pp. 224-225.

1874 L

Supplement to the extinct *Batrachia* and *Reptilia* of North America. I. Catalogue of the air-breathing *Vertebrata* from the Coal-measures of Linton, Ohio.

Trans. Amer. Philos. Soc., xv, pp. 261-278.

Also issued separately with pp. 1-18.

1874 M

On the homologies and origin of the types of molar teeth of *Mammalia educabilia*.

Jour. Acad. Nat. Sci. Phila. (2), viii, pp. 71-89, with 29 figs. in the text.

1874 N

The succession of life in North America.

Ann. and Mag. Nat. Hist. (4), xiii, pp. 326-331.

Reprinted from The Penn Monthly, v, 1874, pp. 138-145.

1874 O

Report upon vertebrate fossils discovered in New Mexico, with descriptions of new species.

Extract from Appendix FF of the Annual Report of the Chief of Engineers, 1874. Washington, Gov. Print. Office, Nov. 28, 1874, pp. 1-18.

In order to make the pagination of the *separata* correspond to that of the Engineer's Report add 588.

This paper also forms "Appendix FF," (pp. 115-130) of "Appendix FF" of the Annual Report of the Chief of Engineers for 1874.

Cope, E. D.—Continued. 1874 P

Report on the stratigraphy and Pliocene vertebrate palæontology of northern Colorado.

Bull. U. S. Geol. and Geog. Survey Terr., i, Bull. No. 1, ser. 1, pp. 9-28.

Includes also "Supplement. Additions to the synopsis of new *Vertebrata* from the Territory of Colorado, 1873," pp. 22-28.

1874 Q

[Remarks on Professor Marsh's *Brontotherium ingens*.]

Proc. Amer. Philos. Soc., xiv, p. 2.

B. ingens is regarded as a synonym of *Symborodon trigonoceras*.

1874 R

On Dr. Leidy's "Correction."

Proc. Acad. Nat. Sci. Phila., pp. 224-225.

1874 S

[Description of a species of *Ctenodus*.]

Proc. Acad. Nat. Sci. Phila., 1874, pp. 91-92.

This species of *Ctenodus* is without name, but it was afterwards called *C. ohioensis*.

1874 T

[Remarks on skulls of *Eobasileus galeatus* and of a fossil walrus.]

Proc. Amer. Philos. Soc., xiv, pp. 17-18.

The skull of *Eobasileus* was from Wyoming; that of the fossil walrus from Accomac Harbor, Va.

1875 A

Note on the genus *Calamodon*.

Amer. Jour. Sci. (3), ix, p. 228.

1875 B

The geology of New Mexico.

Amer. Jour. Sci. (3), x, pp. 152-153.

1875 C

Systematic catalogue of *Vertebrata* of the Eocene of New Mexico, collected in 1874.

Report to the Engineer Department, U. S. Army, in charge of Lieut. Geo. M. Wheeler. Washington, April 17, 1875, pp. 5-37.

1875 D

Synopsis of the extinct *Batrachia* from the Coal-measures.

Report of the Geol. Survey of Ohio, Palæontology, ii, 1875, pp. 350-411; pls. xxvi-xlv.

1875 E

The *Vertebrata* of the Cretaceous formations of the West.

Report U. S. Geol. Surv. of the Territories, ii, pp. 1-303; pls. i-lv, and 10 wood cuts. Washington, D. C., 1875.

Cope, E. D.—Continued. 1875 F

Report on the geology of that part of northwestern New Mexico examined during the field season of 1874, by E. D. Cope, palæontologist and geologist.

Appendix LL of Annual Report of the Chief of Engineers in annual report upon the geographical explorations and surveys west of the 100th meridian, etc., by Geo. M. Wheeler, 1st Lieut., Engineers. Washington, D. C., 1875. Pp. 61-116; pls. (illustrating paleontology) ii, v, vi.

The pagination here given is that of the *separata*. To make this correspond with that of the complete report 920 must be added.

Same as Cope, 1875 U, with different pagination.

1875 G

On the fishes of the Tertiary shales of the South Park.

Bull. U. S. Geol. and Geog. Surv. Territories, 2d series, No. 1, 1875, pp. 3-5.

1875 H

Synopsis of the *Vertebrata* of the Miocene of Cumberland County, New Jersey.

Proc. Amer. Philos. Soc., xiv, pp. 361-364.

1875 I

On the transition beds of the Saskatchewan district.

Proc. Acad. Nat. Sci. Phila., 1875, pp. 9-10.

1875 J

The extinct *Batrachia* of Ohio.

Proc. Acad. Nat. Sci. Phila., 1875, p. 16.

1875 K

On Green-sand *Vertebrata*.

Proc. Acad. Nat. Sci. Phila., 1875, p. 19.

1875 L

On the homologies of the sectorial tooth of *Carnivora*.

Proc. Acad. Nat. Sci. Phila., 1875, pp. 20-23.

1875 M

The feet of *Bathmodon*.

Proc. Acad. Nat. Sci. Phila., 1875, p. 73.

1875 N

On fossil lemurs and dogs.

Proc. Acad. Nat. Sci. Phila., 1875, pp. 255-256.

1875 O

On the antelope deer of the Santa Fé marls.

Proc. Acad. Nat. Sci. Phila., 1875, p. 257.

1875 P

On some new fossil *Ungulata*.

Proc. Acad. Nat. Sci. Phila., 1875, pp. 258-261.

From Palæontological Bulletin No. 19.

Cope, E. D.—Continued.

1875 Q

The phylogeny of the camels.

Proc. Acad. Nat. Sci. Phila., 1875, pp. 261-262.

1875 R

The geology of New Mexico.

Proc. Acad. Nat. Sci. Phila. 1875, pp. 263-267.

1875 S

On an extinct vulturine bird.

Proc. Acad. Nat. Sci. Phila., 1875, p. 271.

Refers *Cathartes umbrosus* to *Vultur*.

1875 T

On fossil remains of reptilia and fishes from Illinois.

Proc. Acad. Nat. Sci. Phila., 1875, pp. 404-411.

Reprinted in Ann. and Mag. Nat. Hist. (4), xvii, 178-184.

According to Prof. Cope (Cope, 1888 BB, p. 286) this paper was not issued until 1876.

1875 U

Report on the geology of that part of northwestern New Mexico examined during the field season of 1874, by E. D. Cope, palæontologist and geologist.

From annual report upon the geographical explorations and surveys west of the 100th meridian, in California, etc., by Geo. M. Wheeler; being Appendix LL of the Annual Report of the Chief of Engineers, pp. 981-1017; pls. ii, v, and vi. Pp. 61-97 of separate report LL. Same as Cope, 1875 F, with different pagination.

1875 V

Synopsis of the *Vertebrata* whose remains have been preserved in the formations of North Carolina.

Report Geol. Surv. of North Carolina, i, by W. C. Kerr, Appendix B, pp. 29-52, with pls. v-viii.

1875 W

Report on the vertebrate fossils from the Fort Union group of Milk River.

British North Amer. Boundary Commission's Report on the geology and resources of the region in the vicinity of the forty-ninth parallel, from the Lake of the Woods to the Rocky Mountains, with lists of plants and animals collected and notes on the fossils; by George Mercer Dawson, geologist and botanist to the commission. Montreal, 1875. Pp. 333-337.

1875 X

Check-list of North American *Batrachia* and *Reptilia*, with a systematic list of the higher groups and an essay on geographical distribution; based on the specimens in the U. S. National Museum.

Bull. No. 1, U. S. Nat. Mus., pp. 1-95.

Cope, E. D.—Continued.

1876 A

On the supposed *Carnivora* of the Eocene of the Rocky Mountains.

Palæont. Bull. No. 20, pp. 1-4.

It is stated in this bulletin that it was published Dec. 22, 1875.

1876 B

On a gigantic bird from the Eocene of New Mexico.

Proc. Acad. Nat. Sci. Phila., 1876, pp. 10-11.

Reprinted in Amer. Jour. Sci. (3), xii, pp. 306-307, and in Jour. de Zoologie, v, 1876, pp. 264-267.

Describes *Diatryma gigantea*.

1876 C

On the *Taxiodonta*, a new group of Eocene *Mammalia*.

Proc. Acad. Nat. Sci. Phila., 1876, p. 39.

1876 D

On the geologic age of the vertebrate fauna of the Eocene of New Mexico.

Proc. Acad. Nat. Sci. Phila., 1876, pp. 63-66.

Forms Palæontological Bulletin No. 21.

A translation of this paper appeared in Jour. de Zoologie, v, 1876, pp. 307-311.

1876 E

On some supposed lemurine forms of the Eocene period.

Proc. Acad. Nat. Sci. Phila., 1876, pp. 88-89.

1876 F

On a new genus of fossil fishes.

Proc. Acad. Nat. Sci. Phila., 1876, p. 113.

1876 G

On a new genus of *Camelidæ*.

Proc. Acad. Nat. Sci. Phila., 1876, pp. 144-147.

Describes *Protolabis*.

1876 H

Descriptions of some vertebrate remains from the Fort Union beds of Montana.

Proc. Acad. Nat. Sci. Phila., 1876, pp. 248-261.

Issued also as Pal. Bull. No. 22, pp. 1-14.

1876 I

On some extinct reptiles and *Batrachia* from the Judith River and Fox Hills beds of Montana.

Proc. Acad. Nat. Sci. Phila., 1876, pp. 340-359.

Issued also as Pal. Bull. No. 23, pp. 1-20.

1877 A

A continuation of researches among the *Batrachia* of the Coal-measures of Ohio.

Proc. Amer. Philos. Soc., xvi, pp. 573-578.

Issued as part of Pal. Bull. No. 24.

Cope, E. D.—Continued. 1877 B
On a dinosaurian from the Trias of Utah.

Proc. Amer. Philos. Soc., xvi, pp. 579-584.
Issued as part of Pal. Bull. No. 24.
Describes *Dystrophæus viemalæ*.

1877 C
On a new proboscidian.

Proc. Amer. Philos. Soc., xvi, pp. 584-585.
Also as part of Pal. Bull. No. 24.

Describes *Cænobasilæus tremontigerus*. This genus and species were withdrawn in Cope, E. D., 1889 J., p. 207.

1877 D
On some new or little known reptiles and fishes of the Cretaceous No. 3 of Kansas.

Proc. Amer. Philos. Soc., xvii, pp. 176-181.
Issued also as part of Pal. Bull. No. 26.

1877 E
Descriptions of extinct *Vertebrata* from the Permian and Triassic formations of the United States.

Proc. Amer. Philos. Soc., xvii, pp. 182-193.
Not published until March 1, 1878. Issued as part of Pal. Bull. No. 26. This was "printed Nov. 20, 1877."

1877 F
On reptilian remains from the Dakota beds of Colorado.

Proc. Amer. Philos. Soc., xvii, pp. 193-196.

1877 G
Report on the geology of the region of the Judith River, Montana, and on vertebrate fossils obtained on or near the Missouri River.

Bull. U. S. Geol. and Geog. Surv., iii, article xix, pp. 565-597; pls. 30-34.

1877 H
On a carnivorous dinosaurian from the Dakota beds of Colorado.

Bull. U. S. Geol. and Geog. Surv., iii, article xxxiii, pp. 805-806.
Describes *Lælaps trihedrodon*.

1877 I
A contribution to the knowledge of the ichthyological fauna of the Green River shales.

Bull. U. S. Geol. and Geog. Surv., iii, article xxxiv, pp. 807-819.

1877 J
On the genus *Erisichthe*.
Bull. U. S. Geol. and Geog. Surv., iii, article xxxv, pp. 821-823.

Cope, E. D.—Continued. 1877 K
Report upon the extinct *Vertebrata* obtained in New Mexico by parties of the expedition of 1874. Chapter xi. Fossils of the Mesozoic periods and Geology of Mesozoic and Tertiary beds. xii. Fossils of the Eocene period. xiii. Fossils of the Loup Fork Epoch.

Geographical surveys west of the one hundredth meridian, First Lieut. Geo. M. Wheeler, Corps of Engineers, U. S. Army, in charge. Vol. iv, Palæontology, Washington, 1877. Pp. 1-370, pls. xxii-lxxxiii.

1877 L
On the brain of *Coryphodon*.
Proc. Amer. Philos. Soc., xvi, pp. 616-620; pls. i-ii.

1877 M
On the brain of *Procamelus occidentalis*.
Proc. Amer. Philos. Soc., xvii, pp. 49-52; pl. i.

1877 N
On the *Vertebrata* of the bone bed in eastern Illinois.
Proc. Amer. Philos. Soc., xvii, pp. 52-63.

1877 O
Synopsis of the cold-blooded *Vertebrata* procured by Prof. James Orton during his exploration of Peru in 1876-77.

Proc. Amer. Philos. Soc., xvii, pp. 33-49.
Contains on p. 41 definitions of the sub-classes of fishes, including the new class *Hypopomata*.

1877 P
On a new species of *Adocidæ* from the Tertiary of Georgia.
Proc. Amer. Philos. Soc., xvii, pp. 82-84.
Issued as part of Palæontological Bulletin No. 25.
Describes *Amiphiemys orysternum*.

1877 Q
On a gigantic saurian from the Dakota epoch of Colorado.
Pal. Bull. No. 25, pp. 5-10.
Describes *Camarasaurus supremus*.

1877 R
On *Amphicæliæ*, a genus of saurians from the Dakota epoch of Colorado.
Pal. Bull. No. 27, pp. 2-3, with date Dec. 10, 1877.

1877 S
The lowest mammalian brain.
Amer. Naturalist, xi, pp. 312-313.
Describes brain of *Coryphodon*.

- Cope, E. D.—Continued.** 1877 T
The discovery of *Laelaps* in Montana.
Amer. Naturalist, xi, p. 311.
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- 1877 U
The sea serpents of the Cretaceous period.
Amer. Naturalist, xi, p. 311.
Brief reference to the discovery of *Elasmosaurus orientalis*.
-
- 1877 V
The dentition of the herbivorous *Dinosauria*.
Amer. Naturalist, xi, pp. 311, 312.
-
- 1877 W
The largest known saurian.
Amer. Naturalist, xi, p. 629.
Brief description of "*Camæosaurus*" *supremus*.
-
- 1877 X
Remains of a huge saurian in Pennsylvania.
Amer. Naturalist, xi, p. 629.
Refers to *Palæoconus appalachianus*, described in Proc. Amer. Phil. Soc., 1877, xvii, p. 182 (Cope, 1877 E).
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- 1877 Y
New vertebrate fossils.
Amer. Naturalist, xi, p. 629.
-
- 1877 Z
New fossil fishes from Wyoming.
Amer. Naturalist, xi, p. 570.
A list, without descriptions, of fossil fishes found in Wyoming.
-
- 1878 A
On the classification of the extinct fishes of the lower types.
Proc. Amer. Assoc. Adv. Sci., 26th meeting, Nashville, 1877, pp. 292-300.
-
- 1878 B
Descriptions of extinct *Batrachia* and *Reptilia* from the Permian formation of Texas.
Proc. Amer. Philos. Soc., xvii, pp. 505-530.
Also part of Pal. Bull. No. 29.
-
- 1878 C
Descriptions of new *Vertebrata* from the upper Tertiary formations of the West.
Proc. Amer. Philos. Soc., xvii, pp. 219-231.
Issued also as part of Pal. Bull. No. 28.
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- 1878 D
On some saurians found in the Triassic of Pennsylvania, by C. M. Wheatley.
Proc. Amer. Philos. Soc., xvii, pp. 231-232.
Issued also as part of Pal. Bull. No. 28.
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- Cope, E. D.—Continued.** 1878 E
The saurians of the Dakota epoch.
Amer. Naturalist, xii, pp. 56-57.
Refers to discovery of *Camarasaurus* and *Amphicælias*.
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- 1878 F
Descriptions of fishes from the Cretaceous and Tertiary deposits west of the Mississippi River.
Bull. U. S. Geol. and Geog. Surv. of the Territories, 1878, vol. iv, pp. 67-77.
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- 1878 G
Professor Owen on the *Pythonomorphs*.
Bull. U. S. Geol. and Geog. Surv. Territories, 1878, iv, pp. 299-311.
-
- 1878 H
Descriptions of new extinct *Vertebrata* from the upper Tertiary and Dakota formations.
Bull. U. S. Geol. and Geog. Surv. Territories, 1878, iv, pp. 379-396.
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- 1878 I
On the *Vertebrata* of the Dakota epoch of Colorado.
Proc. Amer. Philos. Soc., xvii, pp. 233-247.
Issued as Pal. Bull. No. 28.
-
- 1878 J
Clepsydrops in Texas.
Amer. Naturalist, xii, p. 57.
A brief note.
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- 1878 K
The affinities of the *Dinosauria*.
Amer. Naturalist, xii, pp. 57-58.
A brief note on the views of Professor Owen on the *Dinosauria*.
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- 1878 L
New artiodactyles of the upper Tertiary.
Amer. Naturalist, xii, p. 58.
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- 1878 M
On the saurians recently discovered in the Dakota beds of Colorado.
Amer. Naturalist, xii, pp. 71-85, with 17 woodcuts in the text.
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- 1878 N
A new *Mastodon*.
Amer. Naturalist, xii, p. 128.
Brief notice of *M. campester*.
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- 1878 O
The snout fishes of the Kansas chalk.
Amer. Naturalist, xii, pp. 128-129.
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- 1878 P
A new genus of *Oreodontidæ*.
Amer. Naturalist, xii, p. 129.
Brief notice of *Ticholeptus*.

Cope, E. D.—Continued. 1878 Q
[Note on fossils obtained by Mr. Russell S. Hill, including bones of *Protostega gigas*.]
Amer. Naturalist, xii, p. 137.

1878 R
A new genus of *Dinosauria* from Colorado.
Amer. Naturalist, xii, pp. 188-189.
Brief notice of discovery of *Hypsiphrus*.

1878 S
[Review of Prof. L. Lesquereux's Contributions to the fossil flora of the Western Territories. Part II. The Tertiary flora.]
Amer. Naturalist, xii, pp. 243-246.

1878 T
The structure of *Coryphodon*.
Amer. Naturalist, xii, pp. 324-326.
Reply to Prof. O. C. Marsh, in Nature, vol. xvii, p. 340.

1878 U
A new fauna.
Amer. Naturalist, xii, pp. 327-328.
Notes discovery of *Diadectes*, *Parionys*, *Trimororhachis*, etc.

1878 V
A new opisthocœlous dinosaur.
Amer. Naturalist, xii, p. 406.
Reprinted in Ann. and Mag. Nat. Hist. 5, vol. ii, p. 194.
Notice of discovery of *Epanterias*.

1878 W
Professor Marsh on Permian reptiles.
Amer. Naturalist, xii, pp. 406-408.
Refers to paper by Professor Marsh in Amer. Jour. Science, May, 1878.

1878 X
The species of *Rhinoceros* of the Loup Fork epoch.
Amer. Naturalist, xii, pp. 488-489.

1878 Y
A new species of *Amphicœlia*.
Amer. Naturalist, xii, pp. 563-564, with 1 woodcut.
Describes *A. fragillimus*.

1878 Z
A new *Diadectes*.
Amer. Naturalist, xii, p. 565.
Describes *D. molaris*.

1878 AA
The vertebræ of *Rachitonus*.
Amer. Naturalist, xii, p. 633.

Cope, E. D.—Continued. 1878 BB
A fossil walrus discovered at Portland, Me.
Amer. Naturalist, xii, p. 633.

1878 CC
The Theromorphous *Reptilia*.
Amer. Naturalist, xii, pp. 829-830.

1878 DD
The homology of the chevron bones.
Amer. Naturalist, xii, p. 319.

1878 EE
Palæontology of Georgia.
Amer. Naturalist, xii, p. 128.
Announces the discovery of fossil reptiles in Cretaceous and Tertiary deposits in Georgia.

1878 FF
Triassic saurians from Pennsylvania.
Amer. Naturalist, xii, p. 58.

1878 GG
A new deer from Indiana.
Amer. Naturalist, iv, p. 189.
Describes *Cariacus dolichopsis*.

1878 HH
Mount Lebanon fishes in Dakota.
Amer. Naturalist, xii, p. 57.

1879 A
The relations of the horizons of extinct *Vertebrata* of Europe and America.
Bull. U. S. Geol. and Geog. Surv. Terr., 1880, v, pp. 33-54.

1879 B
Observations on the faunæ of the Miocene Tertiaries of Oregon.
Bull. U. S. Geol. and Geog. Surv. Terr., 1880, v, pp. 55-69.

1879 C
On the extinct species of *Rhinocœridæ* of North America and their allies.
Bull. U. S. Geol. and Geog. Surv. Terr., 1879-80, v, pp. 227-237.

An adaptation of this paper was published in Amer. Naturalist, xiii, 1879, pp. 771a-771j, with 8 woodcuts.

1879 D
On some characters of the Miocene fauna of Oregon.
Proc. Amer. Philos. Soc., xviii, pp. 63-78.
Also in Pal. Bull. No. 30, pp. 1-16; said to have been issued Dec. 3, 1878.

1879 E
Second contribution to a knowledge of the Miocene fauna of Oregon.
Proc. Amer. Philos. Soc., xviii, pp. 370-376.
Not issued until January, 1880. The same was issued as Pal. Bull. No. 31, pp. 1-7, Dec., 1879.
A notice of this paper with list of species described occurs in Amer. Naturalist, xiv, p. 60.

- Cope, E. D.—Continued.** 1879 F
On the genera of *Felidae* and *Canidae*.
Proc. Acad. Nat. Sci. Phila., 1879, pp. 168-194.
Reprinted in Ann. and Mag. Nat. Hist. (5), vol. v, pp. 36-45, 92-107.
Contains list of genera and species of *Felidae*, the genera of *Canidae*, and descriptions of new species.
- 1879 G
The origin of the specialized teeth of the *Carnivora*.
Amer. Naturalist, xiii, pp. 171-173.
- 1879 H
Extinct *Mammalia* of Oregon.
Amer. Naturalist, xiii, p. 131.
- 1879 I
The necks of the *Sauropterygia*.
Amer. Naturalist, xiii, p. 132.
- 1879 J
The scales of *Liodon*.
Amer. Naturalist, xiii, p. 132.
A brief note calling attention to observation of Professor Snow and to his paper in Review of Science and Industry.
- 1879 K
Merycopater and *Hoplophoneus*.
Amer. Naturalist, xiii, p. 197.
- 1879 L
A new genus of *Perissodactyla*.
Amer. Naturalist, xiii, p. 270.
Establishes the genus *Anchisodon*.
- 1879 M
A new genus of *Ichthyopterygia*.
Amer. Naturalist, xiii, p. 271.
Notice of O. C. Marsh's genus, *Sauranodon*.
- 1879 N
The Amyzon Tertiary beds.
Amer. Naturalist, xiii, p. 332.
- 1879 O
A sting ray from the Green River shales of Wyoming.
Amer. Naturalist, xiii, p. 333.
The genus *Xiphotrygon* established.
- 1879 P
American *Aceratheria*.
Amer. Naturalist, xiii, p. 333.
- 1879 Q
The lower jaw of *Lorolophodon*.
Amer. Naturalist, xiii, p. 334.
- 1879 R
New Jurassic *Dinosauria*.
Amer. Naturalist, xiii, pp. 402-404, with 3 wood cuts.
Descriptions of *Camarasaurus leptodirus* and *Hypsirophus seeleyanus*.
- Cope, E. D.—Continued.** 1879 S
A new *Anchitherium*.
Amer. Naturalist, xiii, pp. 462-463.
Description of *A. præstans*.
- 1879 T
A decade of dogs.
Amer. Naturalist, xiii, p. 530.
A brief note giving a list of ten species of dogs furnished by the Truckee beds in Oregon.
- 1879 U
The cave bear of California.
Amer. Naturalist, xiii, p. 791.
Reprinted in Ann. and Mag. Nat. Hist. (5), vol. v, pp. 260-261; Amer. Jour. Sci., 1880, xix, p. 155.
Describes *Arctotherium simum*.
- 1879 V
On the extinct American rhinoceroses and their allies.
Amer. Naturalist, xiii, pp. 771a-771j, with 8 figs. in the text.
- 1879 W
Palæontological report of the Princeton scientific expedition of 1877.
Amer. Naturalist, xiii, p. 33.
A brief notice of the results of the expedition referred to in the title.
- 1879 X
Scientific news.
Amer. Naturalist, xiii, pp. 798a-798b.
Contains brief notice of excursions to Colorado and descriptions of *Archæolurus debilis* and *Hoplophoneus platycopsis*.
- 1880 A
Second contribution to the history of the *Vertebrata* of the Permian formation of Texas.
Proc. Amer. Philos. Soc., xix, pp. 38-58.
Issued also as Pal. Bull. No. 32, pp. 1-22.
- 1880 B
On the foramina perforating the posterior part of the squamosal bone of the *Mammalia*.
Proc. Amer. Philos. Soc., xviii, pp. 452-461.
- 1880 C
On the genera of the *Creodonta*.
Proc. Amer. Philos. Soc., xix, pp. 76-82.
Synopsis in Kosmos, x, pp. 299-300.
- 1880 D
On the extinct cats of America.
Amer. Naturalist, xiv, pp. 833-858, with 15 wood cuts in the text.
- 1880 E
Hill's Kansas explorations.
Amer. Naturalist, xiv, p. 141.
Note on fossils collected by Russell S. Hill.

- Cope, E. D.—Continued.** 1880 F
Notes on sabre-tooths.
Amer. Naturalist, xiv, p. 143.
New genus *Pogonodon* established.
- 1880 G
A new *Hippidium*.
Amer. Naturalist, xiv, p. 223.
H. spectans, from Oregon, described.
- 1880 H
The skull of *Empedocles*.
Amer. Naturalist, xiv, p. 304.
- 1880 I
A new genus of Tapiroids.
Amer. Naturalist, xiv, pp. 382-383.
The genus *Triplopus* characterized.
- 1880 J
The structure of the Permian *Ganoccephala*.
Amer. Naturalist, xiv, pp. 383-384.
- 1880 K
A new genus of *Rhinocerotidæ*.
Amer. Naturalist, xiv, p. 540.
The genus *Peraceras* established.
- 1880 L
Extinct *Batrachia*.
Amer. Naturalist, xiv, pp. 609-610.
- 1880 M
The genealogy of the American rhinoceroses.
Amer. Naturalist, xiv, pp. 610-611.
The new genus *Cænopus* proposed.
- 1880 N
The bad lands of the Wind River and their fauna.
Amer. Naturalist, xiv, pp. 745-748.
Two new genera and nine new species proposed.
- 1880 O
The northern Wasatch fauna.
Amer. Naturalist, xiv, p. 908.
- 1880 P
Traquair on *Platysomidæ*.
Amer. Naturalist, xiv, pp. 439-440.
Review of Traquair, 1879 A.
- 1880 Q
The Geological Record.
Amer. Naturalist, xiv, p. 512.
A notice of the Geological Record for 1877, with citations of some errors.
- 1880 R
Marsh on Jurassic *Dinosauria*.
Amer. Naturalist, xiv, p. 302.
- 1880 S
Remarks on fossil vertebrates from California. *Elotherium*, *Mastodon obscurus*.
Amer. Naturalist, xiv, p. 62.
- Cope, E. D.—Continued.** 1880 T
The Manti beds of Utah.
Amer. Naturalist, xiv, p. 303.
- 1881 A
On some new *Batrachia* and *Reptilia* from the Permian beds of Texas.
Bull. U. S. Geol. and Geog. Surv. Terr., vi, article ii, pp. 79-82.
- 1881 B
On a wading bird from the Amyzon shales.
Bull. U. S. Geol. and Geog. Surv. Terr., vi, article iii, pp. 83-85.
Describes *Charadrius sheppardianus*.
- 1881 C
On the *Nimravidae* and *Canidae* of the Miocene period.
Bull. U. S. Geol. and Geog. Surv. Terr., vi, article iii, pp. 165-181.
- 1881 D
On the *Vertebrata* of the Wind River Eocene beds of Wyoming.
Bull. U. S. Geol. and Geog. Surv. Terr., vi, article viii, pp. 183-202.
Brief notice in Amer. Naturalist, vol. xv, p. 74 (Cope, 1881 CC).
- 1881 E
Review of the *Rodentia* of the Miocene period of North America.
Bull. U. S. Geol. and Geog. Surv. Terr., vi, article xv, pp. 361-386.
- 1881 F
On the *Canidae* of the Loup Fork epoch.
Bull. U. S. Geol. and Geog. Surv. Terr., vi, article xvi, pp. 387-390.
- 1881 G
The systematic arrangement of the order *Perissodactyla*.
Proc. Amer. Philos. Soc., xix, pp. 377-401.
- 1881 H
On some *Mammalia* of the lowest Eocene beds of New Mexico.
Proc. Amer. Philos. Soc., xix, pp. 484-495.
Issued also as Pal. Bull. No. 33.
- 1881 I
On the origin of the foot structures of the Ungulates.
Amer. Naturalist, xv, pp. 269-273, with 5 figs. in the text.
- 1881 J
On the effect of impacts and strains on the feet of *Mammalia*.
Amer. Naturalist, xv, pp. 542-548, with 11 figs. in the text.

- Cope, E. D.—Continued.** 1881 K
Catalogue of *Vertebrata* of the Permian formation of the United States.
Amer. Naturalist, xv, pp. 162–164.
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- 1881 L
Extinct palæozoic fishes from Canada.
Amer. Naturalist, xv, pp. 252–253.
Notice of a paper read by J. F. Whiteaves.
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- 1881 M
A new fossil bird.
Amer. Naturalist, xv, p. 253.
Notice of Dr. J. A. Allen's description of *Palæospiza bella*.
-
- 1881 N
Mammalia of the Lower Eocene beds.
Amer. Naturalist, xv, pp. 337–338.
Description of *Peryptichus carinidens* and *Deltatherium fundaminiis*, new genera and new species.
-
- 1881 O
The classification of the *Perissodactyla*.
Amer. Naturalist, xv, p. 340.
-
- 1881 P
Miocene dogs.
Amer. Naturalist, xv, p. 497.
Contains correction of dental formula of *Hyænocyon* and proposal of new genus *Oligobunis*.
-
- 1881 Q
The *Rodentia* of the American Miocene.
Amer. Naturalist, xv, pp. 586–587.
A catalogue of the known species, together with place of original description and the horizon of occurrence.
-
- 1881 R
A new *Clidastes* from New Jersey.
Amer. Naturalist, xv, pp. 587–588.
Description of *C. conodon*.
-
- 1881 S
The temporary dentition of a new *Creodont*.
Amer. Naturalist, xv, pp. 667–669.
Description of *Trisodon quivirensis* and *Deltatherium absarokæ*.
-
- 1881 T
A Laramie saurian in the Eocene.
Amer. Naturalist, xv, pp. 669–670.
A new species, *Champsosaurus australis*, found in probably the Puerco.
-
- 1881 U
Mammalia of the lowest Eocene.
Amer. Naturalist, xv, pp. 829–831.
Descriptions of *Conoryctes comma*, gen. et spec. nov., *Catathlæus rhabdodon*, gen. et spec. nov., and *Mioclenus turgidus*, gen. et spec. nov.
-
- Cope, E. D.—Continued.** 1881 V
Eocene *Plagiaulacidae*.
Amer. Naturalist, xv, pp. 921–922.
Description of *Ptilodus medius*, gen. et spec. nov.
-
- 1881 W
Belodon in New Mexico.
Amer. Naturalist, xv, pp. 922–923.
Descriptions of *B. buceros* and *B. scolopax*.
-
- 1881 X
A new type of *Perissodactyla*.
Amer. Naturalist, xv, pp. 1017–1018.
Refers *Phenacodus* to the *Perissodactyla*.
-
- 1881 Y
New genus of *Perissodactyla* *diplathra*.
Amer. Naturalist, xv, p. 1018.
Refers *Hyacotherium tapirinum* to a new genus, *Systemodon*.
-
- 1881 Z
Notes on *Creodonta*.
Amer. Naturalist, xv, pp. 1018–1020.
Describes *Lipodectes penetrans* and *L. pelvidens*, new species, and establishes the genus *Dissacus*.
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- 1881 AA
The Permian formation of New Mexico.
Amer. Naturalist, xv, pp. 1020–1021.
New species described, *Eryops reticulatus* and *Zatrachys apicalis*.
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- 1881 BB
Geological news.
Amer. Naturalist, xv, pp. 254, 340, 413, 1023.
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- 1881 CC
The *Vertebrata* of the Eocene of the Wind River basin.
Amer. Naturalist, xv, pp. 74–75.
Consists of a notice of the paper Cope 1881 D, and contains description of *Buthyopsis fissidens* Cope.
-
- 1882 A
The classification of the ungulate *Mammalia*.
Proc. Amer. Philos. Soc., xx, pp. 438–447, with 10 figs. in the text.
Issued also as part of Pal. Bul. No. 35.
-
- 1882 B
Third contribution to the history of the *Vertebrata* of the Permian formation of Texas.
Proc. Amer. Philos. Soc., xx, pp. 447–461.
Issued also as part of Pal. Bull. No. 35.
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- 1882 C
Synopsis of the *Vertebrata* of the Puerco Eocene epoch.
Proc. Amer. Philos. Soc., xx, pp. 461–471.
Also as part of Pal. Bull. No. 35.

- Cope, E. D.—Continued.** 1882 D
On the systematic relations of the
Carnivora Fissipedia.
Proc. Amer. Philos. Soc., xx, pp. 471-475.
Issued also as part of Pal. Bull. No. 35. Re-
printed in Ann. and Mag. Nat. Hist. (5), xii,
pp. 112-116.
- 1882 E
Contributions to the history of the
Vertebrata of the Lower Eocene of Wy-
oming and New Mexico, made during
1881. I. The fauna of the Wasatch
beds of the basin of the Big Horn
River. II. The fauna of the Catathlaeus
beds, or Lowest Eocene, New Mexico.
Proc. Amer. Philos. Soc., xx, pp. 139-197.
Issued also as Pal. Bull. No. 34.
For notices of this paper see Amer. Jour.
Sci., vol. xxiii, p. 325.
- 1882 F
On the *Condylarthra*.
Proc. Acad. Nat. Sci. Phila., 1882, pp. 95-97.
Reprinted in Ann. and Mag. Nat. Hist. (5), x,
pp. 76-79.
- 1882 G
Contemporaneity of man and Plio-
cene mammals.
Proc. Acad. Nat. Sci. Phila., 1882, pp. 291-
292.
- 1882 H
On *Uintatherium*, *Bathmodon*, and
Triisodon.
Proc. Acad. Nat. Sci. Phila., 1882, pp. 294-
300.
- 1882 I
The Tertiary formations of the cen-
tral region of the United States.
Amer. Naturalist, xvi, pp. 177-195, with 5
wood cuts in the text.
- 1882 J
The reptiles of the American Eocene.
Amer. Naturalist, xvi, pp. 979-993, with 13
wood cuts in the text.
- 1882 K
The oldest artiodactyle.
Amer. Naturalist, xvi, p. 71.
Reprinted in Ann. and Mag. Nat. Hist. (5),
ix, p. 204.
Description of *Miocænus brachystomus*.
- 1882 L
The characters of the *Tæniodonta*.
Amer. Naturalist, xvi, p. 72.
Reprinted in Ann. and Mag. Nat. Hist. (5),
ix, pp. 205-206.
- 1882 M
New forms of *Coryphodontidæ*.
Amer. Naturalist, xvi, p. 73.
- Cope, E. D.—Continued.** 1882 N
An anthropomorphous lemur.
Amer. Naturalist, xvi, pp. 73-74.
Describes *Anaptomorphus homunculus*.
- 1882 O
Recent extinction of the mastodon.
Amer. Naturalist, xvi, pp. 74-75.
Refers to Prof. John Collett's "Geological
Report of Indiana for 1880."
- 1882 P
A new genus of *Tillodonta*.
Amer. Naturalist, xvi, pp. 156-157.
Describes *Psittacotherium multifragum*.
- 1882 Q
Marsh on the classification of the
Dinosauria.
Amer. Naturalist, xvi, pp. 253-255.
- 1882 R
New characters of the *Perissodactyla*
Condylarthra.
Amer. Naturalist, xvi, p. 334.
- 1882 S
Mesonyx and *Oxyæna*.
Amer. Naturalist, xvi, p. 334.
- 1882 T
The rhachitomous *Stegocephala*.
Amer. Naturalist, xvi, pp. 334-335.
- 1882 U
A second genus of Eocene *Plagiarula-*
cidæ.
Amer. Naturalist, xvi, pp. 416-417.
Description of *Catopsalis foliatus*.
- 1882 V
Two new genera of the Puerco
Eocene.
Amer. Naturalist, xvi, pp. 417-418.
Descriptions of *Haploconus lineatus* and *Pan-*
tolambia bathmodon, new genera and new
species.
- 1882 W
The ancestry and habits of *Thylo-*
coleo.
Amer. Naturalist, xvi, pp. 520-522.
Correction of the table of genera of *Plagi-*
aulacidæ.
- 1882 X
Notes on Eocene *Mammalia*.
Amer. Naturalist, xvi, p. 522.
Lipodectes penetrans is a synonym of *Della-*
tharum fundaminis. *D. absarokæ* is referred to
Didelphodus. *Oligotomus osbornianus* is re-
ferred to *Ectocion*.
- 1882 Y
On the *Taxeopoda*, a new order of
Mammalia.
Amer. Naturalist, xvi, pp. 522-523.

- Cope, E. D.—Continued.** 1882 Z
A new genus of *Tæniodonta*.
Amer. Naturalist, xvi, pp. 604-605.
Description of *Tæniolabis sulcatus*.
-
- 1882 AA
New marsupials from the Puerco Eocene.
Amer. Naturalist, xvi, pp. 684-686.
Polymastodon taðensis, gen. et spec. nov.;
Ptilodus trovessartianus, spec. nov.; *Haploconus endoconus*, spec. nov.; and *H. gillianus* spec. nov.
-
- 1882 BB
Mammalia in the Laramie formation.
Amer. Naturalist, xvi, pp. 830-831.
Description of *Meniscoëssus conquistus*, gen. et spec. nov.
-
- 1882 CC
A new form of *Tæniodonta*.
Amer. Naturalist, xvi, pp. 831-832.
Describes *Hemiganus vultuosus*, gen. et spec. nov.
-
- 1882 DD
The *Periptychidæ*.
Amer. Naturalist, xvi, pp. 832-833.
Periptychidæ, fam. nov. established; *Hemithlæus kowalevskianus*, gen. et spec. nov., and *Atisonchus coniferus* described.
-
- 1882 EE
Some new forms from the Puerco Eocene.
Amer. Naturalist, xvi, pp. 833-834.
Miocænus opisthacus, *M. baldwini*, *Protogonia plicifera*, and *Dissacus carnifex* described.
-
- 1882 FF
The recent discoveries of fossil foot-prints in Carson, Nev.
Amer. Naturalist, xvi, pp. 921-923.
Notice of a paper by Prof. Jos. Le Conte.
-
- 1882 GG
Two new genera of *Mammalia* from the Wasatch Eocene.
Amer. Naturalist, xvi, p. 1029.
Genera *Diacodexis* and *Heptodon* established.
-
- 1882 HH
Permian *Vertebrata*.
Amer. Naturalist, xvi, p. 925.
A short note.
-
- 1882 II
Geological news.
Amer. Naturalist, xvi, pp. 925-926.
Mention of *Orthocynodon* of Scott and Osborn.
-
- 1882 JJ
Scientific news.
Amer. Naturalist, xvi, pp. 533-534.
-
- 1883 A
On a new extinct genus and species of *Percidæ* from Dakota Territory.
Amer. Jour. Sci. (3), xxv, pp. 414-416.
-
- Cope, E. D.—Continued.** 1883 B
The evidence for evolution in the history of the extinct *Mammalia*.
Science, ii, pp. 272-279.
Address at the Amer. Assoc. Adv. Science, at Minneapolis, Minn. Reprinted in *Nature*, vol. xxix, pp. 227-230, 248-250.
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- 1883 C
The structure of the skull in *Diclonius mirabilis*, a Laramie dinosaurian.
Science (1), ii, p. 338.
Abstract of paper read before Amer. Assoc. Adv. Sci.
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- 1883 D
The classification of the *Ungulata*.
Proc. Amer. Assoc. Adv. Science, 31st meeting, Montreal, 1882, pp. 477-479.
Abstract of paper read.
-
- 1883 E
The fauna of the Puerco Eocene.
Proc. Amer. Assoc. Adv. Science, 31st meeting, Montreal, 1882, pp. 479-480.
Abstract of paper read before A. A. A. S.
-
- 1883 F
On a new basin of White River age in Dakota.
Proc. Amer. Philos. Soc., xxi, pp. 216-217.
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- 1883 G
On the brains of the Eocene *Mammalia*, *Phenacodus* and *Periptychus*.
Proc. Amer. Philos. Soc., xx, pp. 563-565, with pl. i and ii.
Issued also as part of Pal. Bull. No. 36.
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- 1883 H
Fourth contribution to the history of the Permian formation in Texas.
Proc. Amer. Philos. Soc., xx, pp. 628-636.
Issued also as part of Pal. Bull. No. 36.
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- 1883 I
On the mutual relations of the bunotherian *Mammalia*.
Proc. Acad. Nat. Sci. Phila., 1883, pp. 77-83.
Reprinted in Ann. and Mag. Nat. Hist. (5), xii, pp. 20-26.
-
- 1883 J
On the characters of the skull in the *Hadrosauridæ*.
Proc. Acad. Nat. Sci. Phila., 1883, pp. 97-107, with pls. iv-vii.
-
- 1883 K
On some *Vertebrata* from the Permian of Illinois.
Proc. Acad. Nat. Sci. Phila., 1883, pp. 108-110.
Diplodus replaced by *Didymodus*; *Thoracodus emydinus* gen. et spec. nov., *Ctenodus heterolophus* sp. nov., *Ctenodus rabasensis* sp. nov., described.

- Cope, E. D.—Continued.** 1883 L
On the fishes of the recent and Pliocene lakes of the western part of the Great Basin, and of the Idaho Pliocene lake.
Proc. Acad. Nat. Sci. Phila., 1883, pp. 134-166, with a map of the region.
- 1883 M
First addition to the fauna of the Puerco Eocene.
Proc. Amer. Philos. Soc., xx, pp. 545-563.
Issued also as part of Pal. Bull. No. 36.
Contains descriptions of 2 new genera and 8 species; also "Note on the Mammalia of the Puerco and the origin of the quadritubercular molar."
- 1883 N
On a new extinct genus of *Sirenia* from South Carolina.
Proc. Acad. Nat. Sci. Phila., 1883, pp. 52-54.
Describes *Dioplotherium manigaulti*.
- 1883 O
The tritubercular type of superior molar tooth.
Proc. Acad. Nat. Sci. Phila., 1883, p. 56.
- 1883 P
Permian fishes and reptiles.
Proc. Acad. Nat. Sci. Phila., 1883, p. 69.
- 1883 Q
On some fossils of the Puerco formation.
Proc. Acad. Nat. Sci. Phila., 1883, pp. 168-170.
- 1883 R
On extinct *Rhinoceri* from the Southwest.
Proc. Acad. Nat. Sci. Phila., 1883, p. 301.
- 1883 S
The extinct *Rodentia* of North America.
Amer. Naturalist, xvii, pp. 43-57, 165-174, 370-381, with 30 wood cuts in the text.
- 1883 T
On the extinct dogs of North America.
Amer. Naturalist, xvii, pp. 235-249, with 14 wood cuts in the text.
- 1883 U
On *Uintatherium* and *Bathmodon*.
Amer. Naturalist, xvii, p. 68.
- 1883 V
The Nevada biped tracks.
Amer. Naturalist, xvii, pp. 69-71, with 3 figs.
- Cope, E. D.—Continued.** 1883 W
New *Mammalia* from the Puerco Eocene.
Amer. Naturalist, xvii, p. 191.
Notice and abstract of paper read before Amer. Philos. Soc. (Cope, 1883 M.)
- 1883 X
A new fossil Sirenian.
Amer. Naturalist, xvii, p. 309.
Abstract of Cope, E. D., 1883 N.
- 1883 Y
Lydekker on Indian *Mammalia*.
Amer. Naturalist, xvii, pp. 405-406.
Discusses the standing of certain genera of *Rhinocerotidae*.
- 1883 Z
The ancestor of *Coryphodon*.
Amer. Naturalist, xvii, pp. 406-407.
- 1883 AA
Note on the trituberculate type of molar and the origin of the quadrituberculate.
Amer. Naturalist, xvii, pp. 407-408.
- 1883 BB
The genus *Phenacodus*.
Amer. Naturalist, xvii, p. 535, pl. xii.
- 1883 CC
The structure and appearance of the Laramie dinosaurian.
Amer. Naturalist, xvii, pp. 774-777, pls. xvi-xix.
Description of *Diclonius mirabilis*.
- 1883 DD
The "third trochanter" of the dinosaurs.
Amer. Naturalist, xvii, p. 869.
Notice of observations made by M. Dollo.
- 1883 EE
Some new *Mammalia* of the Puerco formation.
Amer. Naturalist, xvii, p. 968.
Abstract of paper, Cope, E. D., 1883 Q.
- 1883 FF
The progress of the *Ungulata* in Tertiary time.
Amer. Naturalist, xvii, pp. 1055-1057.
Abstract of paper read before the A. A. A. S. in Minneapolis, 1883.
- 1883 GG
A new Chondrosteian from the Eocene.
Amer. Naturalist, xvii, pp. 1152, 1153.
Describes *Crassopholis magnicaudatus* gen. et spec. nov.

- Cope, E. D.—Continued.** 1883 HH
The Carson footprints.
Amer. Naturalist, xvii, p. 1153.
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- 1883 II
Geological notes. Tertiary.
Amer. Naturalist, xvii, pp. 970-971.
-
- 1884 A
A Carboniferous genus of sharks still living.
Science, iii, p. 275.
Refers to S. Garman's *Chlamydoselachus*.
-
- 1884 B
Pleuracanthus and *Didymodus*.
Science, iii, pp. 645-646.
Reply to Dr. Theo. Gill (Gill, 1884 A.).
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- 1884 C
[On the phylogeny of American artiodactyle mammals.]
Science, iv, p. 339.
Abstract of paper read before Amer. Assoc. Adv. Sci., 1884.
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- 1884 D
[On saurians of the Permian epoch.]
Science, iv, p. 340.
Abstract of paper read before Amer. Assoc. Adv. Sci., 1884.
-
- 1884 E
On the trituberculate type of molar tooth in the *Mammalia*.
Proc. Amer. Assoc. Adv. Science, 32d meeting, Minneapolis, 1883, pp. 313-316.
Abstract of paper read.
-
- 1884 F
On the structure of the skull in *Diclonius mirabilis*, a Laramie dinosaurian.
Proc. Amer. Assoc. Adv. Sci., 32d meeting, Minneapolis, 1883, pp. 315-316; abstract.
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- 1884 G
The extinct *Mammalia* of the Valley of Mexico.
Proc. Amer. Philos. Soc., xxii, pp. 1-21.
Also as part of Pal. Bull. No. 39.
-
- 1884 H
On the structure of the feet in the extinct *Artiodactyla* of North America.
Proc. Amer. Philos. Soc., xxii, pp. 21-27.
Also as part of Pal. Bull. No. 39.
-
- 1884 I
Fifth contribution to the knowledge of the fauna of the Permian Formation of Texas and the Indian Territory.
Proc. Amer. Philos. Soc., xxii, pp. 28-47, pl. i.
Also as part of Pal. Bull. No. 39.
Besides descriptions of new species, this paper discusses: The posterior foot in Pelycosauria; the structure of the columella auris in *Clepsydraps leptocephalus*; the structure of the quadrate bone in the genus *Clepsydraps*; the articulation of the ribs in *Embolophorus*; the origin of the *Mammalia*; the tarsus; phylogeny of the *Vertebrata*.
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- Cope, E. D.—Continued.** 1884 J
On the distribution of the Loup Fork formation in New Mexico.
Proc. Amer. Philos. Soc., xxi, pp. 308-309.
Issued also as part of Pal. Bull. No. 37.
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- 1884 K
Second addition to the knowledge of the Puerco epoch.
Proc. Amer. Philos. Soc., xxi, pp. 309-324.
Issued also as part of Pal. Bull. No. 37.
-
- 1884 L
On the trituberculate type of molar tooth in the *Mammalia*.
Proc. Amer. Philos. Soc., xxi, pp. 324-326.
Issued also as part of Pal. Bull. No. 37.
This paper is practically the same as Cope, 1884 E.
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- 1884 M
Synopsis of the species of *Oreodontidae*.
Proc. Amer. Philos. Soc., xxi, pp. 503-572.
Issued also as part of Pal. Bull. No. 38.
-
- 1884 N
On the structure of the skull in the elasmobranch genus *Didymodus*.
Proc. Amer. Philos. Soc., xxi, pp. 572-590, with 1 pl.
Issued also as part of Pal. Bull. No. 38.
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- 1884 O
The *Vertebrata* of the Tertiary formations of the West. Book I.
Report U. S. Geol. Survey of the Territories, F. V. Hayden, U. S. geologist in charge, 1884, Washington, iii, pp. i-xxxv, 1-1009; pls. i-lxxv.
This work was not actually issued until the year 1885.
Reviewed in Geol. Magazine, (3) iii, pp. 410-419, 465-477, 512-521.
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- 1884 P
The *Batrachia* of the Permian period of North America.
Amer. Naturalist, xviii, pp. 26-39, with pls. ii-v and 7 woodcuts.
-
- 1884 Q
The Loup Fork beds on the Gila River.
Amer. Naturalist, xviii, pp. 58-59.
Mentions finding of *Aphelops fossiger*.
-
- 1884 R
On new lemuroids from Puerco formation.
Amer. Naturalist, xviii, pp. 59-62.
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- 1884 S
The *Creodonta*.
Amer. Naturalist, xviii, pp. 255-267, 344-353, 478-485, with 30 woodcuts in the text.

- Cope, E. D.—Continued.** 1884 T
The history of the *Oreodontidæ*.
Amer. Naturalist, xviii, pp. 280-282.
Synopsis of portion of a paper read before
Amer. Philos. Society.
- 1884 U
The skull of a still living shark of the
Coal-measures.
Amer. Naturalist, xviii, pp. 412-413.
Refers *Chlamydoselachus anguineus* to *Didymodus*.
- 1884 V
The mastodons of North America.
Amer. Naturalist, xviii, pp. 524-526.
Descriptions of 9 species.
- 1884 W
Marsh on *Diplodocus*.
Amer. Naturalist, xviii, p. 526.
- 1884 X
The pelvisternum of Edentates.
Amer. Naturalist, xviii, pp. 639-640.
Notice of paper by P. Albrecht.
- 1884 Y
The Tertiary *Marsupialia*.
Amer. Naturalist, xviii, pp. 686-697, with 9
illus.
- 1884 Z
Lydekker on extinct *Mammalia* of
India.
Amer. Naturalist, xviii, pp. 617-618.
- 1884 AA
The *Condylarthra*.
Amer. Naturalist, xviii, pp. 790-805, 892-906;
pls. xxviii-xxx and 28 woodcuts in the text.
- 1884 BB
The *Choristodera*.
Amer. Naturalist, xviii, pp. 815-817.
Remarks on paper by Dr. Lemoine on *Sinæ-
dosaurus*.
- 1884 CC
The genus *Pleuracanthus*.
Amer. Naturalist, xviii, p. 818; pl. xxiii.
Plate containing figures of *Didymodus com-
pressus* and *D. platypterus*.
- 1884 DD
Observations on the phylogeny of the
Artiodactyla derived from American
fossils.
Amer. Naturalist, xviii, pp. 1034-1036.
- 1884 EE
The *Amblypoda*.
Amer. Naturalist, xviii, pp. 1110-1121, 1192-
1202, with 23 woodcuts in the text.
Concluded in vol. xix, pp. 40-55.
- 1884 FF
The origin of the *Mammalia*.
Amer. Naturalist, xviii, pp. 1136-1137.
Synopsis of paper read before the Amer.
Assoc. Adv. Sci., 1884.
- Cope, E. D.—Continued.** 1884 GG
The structure of the columella auris
in *Clepsydraps leptocephalus*.
Amer. Naturalist, xviii, pp. 1253-1255, pl. 38.
- 1884 HH
Note on the phylogeny of the *Verte-
brata*.
Amer. Naturalist, xviii, pp. 1255-1257.
- 1884 II
The evidence for evolution in the
history of the extinct *Mammalia*.
Nature, xxix, pp. 227-230, 248-250.
Abstract of lecture given before Amer.
Assoc. Adv. Sci., 1884.
- 1884 JJ
Genus *Equus*.
Fourteenth Report State Geologist Indiana,
pt. ii, pp. 40-41, being an appendix to article
by Cope and Wortman.
- 1885 A
The relations between the thero-
morphous reptiles and the monotreme
Mammalia.
Proc. Amer. Asso. Adv. Sci., 33d meeting,
Phila., 1884, pp. 471-482, with 1 pl.
- 1885 B
On the structure of the feet in the
extinct *Artiodactyla* of North America.
Proc. Amer. Assoc. Adv. Sci., 33d meeting,
Phila., 1884, pp. 482-490.
- 1885 C
The occurrence of man in the upper
Miocene of Nebraska.
Proc. Amer. Assoc. Adv. Sci., 33d meeting,
Phila., 1884, p. 593; abstract.
- 1885 D
Second continuation of researches
among the *Batrachia* of the Coal-meas-
ures of Ohio.
Proc. Amer. Philos. Soc., xxii, pp. 405-408.
Also forming a portion of Pal. Bull. No. 40.
- 1885 E
On the contents of a bone cave in
the island of Anguilla (West Indies).
Smithsonian Contributions to Knowledge,
xxv, article iii, pp. 1-30, pls. i-iv.
- 1885 F
The *Amblypoda*.
Amer. Naturalist, xix, pp. 40-55, figs. 24-35.
Treats of the *Dinocerata*, and is continued
from p. 1202, vol. xviii.
- 1885 G
On the evolution of the *Vertebrata*,
progressive and retrogressive.
Amer. Naturalist, xix, pp. 140-148, 234-247,
341-353.
See also Cope, E. D., 1885 AA.

- Cope, E. D.—Continued.** 1885 H
The White River beds of Swift Current River, Northwest Territory.
Amer. Naturalist, xix, p. 163.
- 1885 I
The position of *Pterichthys* in the system.
Amer. Naturalist, xix, pp. 289-291, with 2 figs.
- 1885 J
The oldest Tertiary *Mammalia*.
Amer. Naturalist, xix, pp. 385-387.
- 1885 K
The *Lemuroidea* and the *Insectivora* of the Eocene period of North America.
Amer. Naturalist, xix, pp. 457-471, with 18 woodcuts in the text.
- 1885 L
The mammalian genus *Hemiganus*.
Amer. Naturalist, xix, p. 492.
- 1885 M
Mammals from the Lower Eocene of New Mexico.
Amer. Naturalist, xix, pp. 493-494.
- 1885 N
The genera of the *Dinocerata*.
Amer. Naturalist, xix, p. 594.
- 1885 O
Marsh on the *Dinocerata*.
Amer. Naturalist, xix, pp. 703-705.
- 1885 P
Garman on *Didymodus*.
Amer. Naturalist, xix, pp. 878-879.
- 1885 Q
The relations of the Puerco and Laramie deposits.
Amer. Naturalist, xix, pp. 985-986.
- 1885 R
The ankle and skin of the dinosaur, *Diclonius mirabilis*.
Amer. Naturalist, xix, p. 1208; pl. xxxvii, figs. 1-3.
- 1885 S
Pliocene horses of southwestern Texas.
Amer. Naturalist, xix, pp. 1208-1209; pl. xxxvii, figs. 4-6.
- 1885 T
Mr. Lydekker on *Esthonyx*.
Geol. Magazine (3), ii, pp. 526-527.
- 1885 U
Palæontological nomenclature.
Geol. Magazine (3), ii, pp. 572-575.
- Cope, E. D.—Continued.** 1885 V
The structure of the columella auris in the *Pelycosauria*.
Memoirs Nat. Acad. Sci., iii, pp. 93-95, with 5 figs. in the text.
- 1885 W
The *Batrachia* of the Permian beds of Bohemia and the Labyrinthodont from the Bijori group (India).
Amer. Naturalist, xix, pp. 592-594.
A brief review of works by Fritsch and Lydekker.
- 1885 X
Polemics in palæontology.
Amer. Naturalist, xix, pp. 1207-1208.
- 1885 Y
Eocene paddle-fish and *Goniorhynchidae*.
Amer. Naturalist, xix, pp. 1090-1091.
- 1885 Z
A contribution to the vertebrate palæontology of Brazil.
Proc. Amer. Philos. Soc., xxiii, pp. 1-21, with pl. i.
Also as part of Pal. Bull. No. 40, pp. 1-21, with pl. i.
- 1885 AA
The genealogy of the *Vertebrata* as learned from palæontology.
Trans. Vassar Brothers' Institute, iii, pp. 60-80.
The substance of this lecture was published in the Amer. Naturalist, xix. See Cope, E. D., 1885 G.
- 1886 A
On the structure of the brain and auditory apparatus of a theromorphous reptile of the Permian epoch.
Proc. Amer. Assoc. Adv. Science, 34th meeting, Ann Arbor, 1885, pp. 336-341.
- 1886 B
On two new species of three-toed horses from the upper Miocene, with notes on the fauna of the Ticholeptus beds.
Proc. Amer. Philos. Soc., xxiii, pp. 357-361.
- 1886 C
The phylogeny of the *Camelidae*.
Amer. Naturalist, xx, pp. 611-624, with 12 wood cuts in the text.
- 1886 D
An interesting connecting genus of *Chordata*.
Amer. Naturalist, xx, pp. 1027-1031.
Description of *Mycterops ordinatus*.

- Cope, E. D.—Continued.** 1886 E
The sternum of the *Dinosauria*.
Amer. Naturalist, xx, pp. 153-154, with 2 figs.
in the text.
- 1886 F
Corrections of notes on *Dinocerata*.
Amer. Naturalist, xx, p. 155.
- 1886 G
An extinct dog.
Amer. Naturalist, xx, p. 274.
Notice of *Pachycyon robustus* described by
Dr. J. A. Allen.
- 1886 H
The vertebrate fauna of the Ticholep-
tus beds.
Amer. Naturalist, xx, pp. 367-369.
- 1886 I
The *Plagiaulacidæ* of the Puerco
epoch.
Amer. Naturalist, xx, p. 451.
Describes *Neoplagiaulax molestus*.
- 1886 J
The long-spined *Theromorpha* of the
Permian epoch.
Amer. Naturalist, xx, pp. 544-545.
- 1886 K
Schlosser on the phylogeny of the
ungulate *Mammalia*.
Amer. Naturalist, xx, pp. 719-721.
Review of paper by Max Schlosser in Mor-
phologisches Jahrbuch for 1886.
For reply to Professor Cope see Morpholog.
Jahrbuch, xii, pp. 575-580.
- 1886 L
Schlosser on *Creodonta* and *Phenaco-
dus*.
Amer. Naturalist, xx, pp. 965-967.
Review of paper by Max Schlosser in Mor-
pholog. Jahrbuch, 1886, p. 287.
- 1886 M
Dollo on extinct tortoises.
Amer. Naturalist, xx, p. 967.
Review of paper by M. Dollo in Bull. Mus.
Roy. Belgique, 1886, p. 75.
- 1886 N
A giant armadillo from the Miocene
of Kansas.
Amer. Naturalist, xx, pp. 1044-1046.
Describes *Caryoderma snowianum*.
- 1886 O
The batrachian intercentrum.
Amer. Naturalist, xx, pp. 76-77.
- 1886 P
The intercentrum in *Sphenodon*.
Amer. Naturalist, xx, p. 175.
- 1886 Q
Note on *Phenacodus*.
Geol. Magazine (3), iii, pp. 238-239.
- Cope, E. D.—Continued.** 1886 R
Note on *Erisichthe*.
Geol. Magazine (3) iii, p. 239.
- 1886 S
Edestus and *Pelecopterus*.
Geol. Magazine (3) iii, pp. 141-142.
Refers to statements in Woodward H., 1886 A
regarding *Pelecopterus*, with a reply by Mr. W.
Davies, F. G. S.
- 1886 T
On two new forms of Polyodont and
Gonorhynchid fishes from the Eocene
of the Rocky Mountains.
Memoirs Nat. Acad. Sciences, iii, pp. 161-169,
with plate containing 6 figures.
Describes *Crossopholis magnicaudatus*, *Noto-
goneus osculus* and *Priscacara hypsacanthus*.
See notice of this paper in Geol. Magazine,
vol. v, 1888, p. 229, by A. S. Woodward.
- 1886 U
The *Vertebrata* of the Swift Current
Creek region of the Cypress Hills.
Annual Report of the Geol. and Nat. Hist.
Survey of Canada, i, 1885, appendix to article
C, pp. 79-85.
- 1886 V
An analytical table of the genera of
snakes.
Proc. Amer. Philos. Society, xxiii, pp. 479-
499.
- 1886 W
Report on the coal deposits near
Zacualtipan, in the State of Hidalgo,
Mexico.
Proc. Amer. Philos. Soc., xxiii, pp. 146-151,
with 2 text figures.
In this paper are described *Hippotherium
peninsulatum*, sp. nov., and *Protohippus castilli*,
sp. nov., from Loup Fork shales, near Vera
Cruz.
- 1887 A
A contribution to the history of the
Vertebrata of the Trias of North Amer-
ica.
Proc. Amer. Philos. Soc., xxiv, pp. 209-228,
pls. i, ii.
- 1887 B
The classification and phylogeny of
the *Artiodactyla*.
Proc. Amer. Philos. Soc., xxiv, pp. 377-400.
- 1887 C
The dinosaurian genus *Cælorus*.
Amer. Naturalist, xxi, pp. 367-369.
- 1887 D
The Mesozoic and Cænozoic realms
of the interior of North America.
Amer. Naturalist, xxi, pp. 445-462.

- Cope, E. D.—Continued.** 1887 E
 American Triassic *Rhynchocephalia*.
 Amer. Naturalist, xxi, p. 468.
 Description of *Typothorax coccinarum*.
- 1887 F
 Some new *Tæniodonta* of the Puerco.
 Amer. Naturalist, xxi, p. 469.
 Description of *Psittacotherium megalodus*.
- 1887 G
 The sea-saurians of the Fox Hills
 Cretaceous.
 Amer. Naturalist, xxi, pp. 563-566.
 Description of *Piptomerus megaloporus*, *P. microporus*, *P. hexagonus*, and *Orophosaurus pauciporus*.
- 1887 H
 The marsupial genus *Chirox*.
 Amer. Naturalist, xxi, pp. 566-567, with 1
 woodcut in the text.
- 1887 I
 Pavlow on the ancestry of Ungulates.
 Amer. Naturalist, xxi, pp. 656-658.
- 1887 J
 [Note on *Belodon buceros*.]
 Amer. Naturalist, xxi, pp. 659-660.
- 1887 K
 Scott and Osborn on White River
Mammalia.
 Amer. Naturalist, xxi, pp. 924-926.
 Review of above author's paper, "Preliminary account of fossil mammals from the White River formation," etc., in Bull. Mus. Comp. Zool., vol. xiii.
- 1887 L
 Marsh on new fossil *Mammalia*.
 Amer. Naturalist, xxi, pp. 926-927.
 Review of Marsh, 1887 B.
- 1887 M
 Scott on *Creodonta*.
 Amer. Naturalist, vol. xxi, p. 927.
 Review of Scott in Jour. Acad. Nat. Sci., Phila., vol. ix, pp. 155-185.
- 1887 N
 The *Perissodactyla*.
 Amer. Naturalist, xxi, pp. 985-1007; 1060-1076, with 44 figs. in the text.
- 1887 O
 Zittel's Manual of Palæontology.
 Amer. Naturalist, xxi, pp. 1014-1019.
 A review of the above work of Professor Zittel, and containing a classification of the Teleostomous fishes.
- 1887 P
 A saber-toothed tiger from the Loup
 Fork beds.
 Amer. Naturalist, xxi, pp. 1019-1020.
 Description of *Macharodus catocypis*.
- Cope, E. D.—Continued.** 1887 Q
 Thomas on mammalian dentition.
 Amer. Naturalist, xxi, pp. 1101-1103.
 Review of Thomas, O., in Phil. Trans. Roy. Soc., vol. clxxviii B., pp. 443-486.
- 1887 R
 Lydekker, Boulenger, and Dollo on
 fossil tortoises.
 Geol. Magazine (3), iv, pp. 572-573.
- 1887 S
 The origin of the fittest. Essays on
 evolution.
 8 vo., pp. 1-xx; 1-467, with 81 figs. in the text.
 New York, 1887.
 This work is composed of 21 essays, all of
 which had been previously published elsewhere.
- 1888 A
 Mesozoic Realm.
 Amer. Geologist, ii, pp. 261-268.
 A portion of the reports of the American
 committee of the International Congress of
 Geologists.
- 1888 B
 Report of the subcommittee on the
 Cenozoic (Interior). Cenozoic Realm.
 Amer. Geologist, ii, pp. 285-299.
 A portion of the reports of the American
 committee of the International Congress of
 Geologists.
- 1888 C
 Vertebrate fauna of the Puerco series.
 Science, xi, p. 198.
 Abstract of paper read before the Nat. Acad.
 of Sci., 1888.
- 1888 D
 The mechanical origin of the sectorial
 teeth of the *Carnivora*.
 Proc. Amer. Assoc. Adv. Sci., 36th meeting.
 New York, 1887, pp. 254-257.
- 1888 E
 On the *Dicotylinae* of the John Day
 Miocene of North America.
 Proc. Amer. Philos. Soc., xxv, pp. 62-79.
- 1888 F
 On the mechanical origin of the den-
 tition of the *Amblypoda*.
 Proc. Amer. Philos. Soc., xxv, pp. 80-88, with
 6 woodcuts in the text.
- 1888 G
 On the tritubercular molar in human
 dentition.
 Jour. Morphology, ii, pp. 7-26, pls. ii, iii.
- 1888 H
 On the relation of the hyoid and
 otic elements of the skeleton in the
Batrachia.
 Jour. Morphology, ii, pp. 297-310, with pls.
 xxii-xxiv.

Cope, E. D.—Continued.

1888 I

The mechanical causes of the origin of the dentition of the *Rodentia*.

Amer. Naturalist, xxii, pp. 3-11, with 7 woodcuts in the text.

1888 J

Note on the *Marsupialia multituberculata*.

Amer. Naturalist, xxii, pp. 12-13, with 2 figs. in the text.

1888 K

The vertebrate fauna of the Puerco epoch.

Amer. Naturalist, xxii, pp. 161-163.

1888 L

Lydekker's Catalogue of Fossil *Mammalia* in the British Museum, Part V.

Amer. Naturalist, xxii, pp. 164-165.

Review of Lydekker R. 1887 A.

1888 M

The *Multituberculata* Monotremes.

Amer. Naturalist, xxii, p. 259.

Refers to the discovery of teeth in the young of *Ornithorhynchus*, and the conclusion is reached that the *Multituberculata* are Monotremes.

1888 N

Glyptodon from Texas.

Amer. Naturalist, xxii, pp. 345-346.

Describes *G. petaliferus*.

1888 O

The ossicula auditus of the *Batrachia*.

Amer. Naturalist, xxii, pp. 464-467, pl. vi.

1888 P

Notes on *Cœlosteus ferox* Newb. and *Titanichthys clarkii* Newb.

Amer. Naturalist, xxii, pp. 637-638.

1888 Q

Topinard on the latest steps in the genealogy of man.

Amer. Naturalist, xxii, pp. 660-663.

1888 R

Osborn on the Mesozoic *Mammalia*.

Amer. Naturalist, xxii, pp. 723-724, pl. xiv.

Review of Osborn, H. F., 1888 G.

1888 S

Lydekker on the *Ichthyosauria* and *Plesiosauria*.

Amer. Naturalist, xxii, pp. 724-726.

Review of Lydekker, R., 1888 D.

1888 T

Rütimeyer on the classification of *Mammalia*, and on American types recently found in Switzerland.

Amer. Naturalist, xxii, pp. 831-835.

Review of Rütemeyer, L. 1888 A.

Cope, E. D.—Continued.

1888 U

The pineal eye in extinct vertebrates.

Amer. Naturalist, xxii, pp. 914-917, pls. xv-xviii.

1888 V

Handbuch der Palæontologie of Zittel.

Amer. Naturalist, xxii, pp. 1018-1019.

Review of Zittel, K. A. 1890 A.

1888 W

Schlosser on *Carnivora*.

Amer. Naturalist, xxii, pp. 1019-1020.

Review of Schlosser, M. 1887 B.

1888 X

The *Artiodactyla*.

Amer. Naturalist, xxii, pp. 1079-1095, pls. xxvii, xxviii, and 6 woodcuts in text.

1888 Y

Goniopholis in the Jurassic of Colorado.

Amer. Naturalist, xxii, pp. 1106-1107.

Describes *G. lucasii* Cope, transferred from *Amphicotylus*.

1888 Z

A horned dinosaurian reptile.

Amer. Naturalist, xxii, pp. 1108-1109.

Refers to Marsh, O. C. 1888 C.

1888 AA

On the intercentrum of the terrestrial *Vertebrata*.

Trans. Amer. Philos. Soc., xvi, pp. 243-253, with pl. i, and 6 figs. in the text.

1888 BB

Systematic catalogue of the species of *Vertebrata* found in the beds of the Permian epoch in North America, with notes and descriptions.

Trans. Amer. Philos. Soc., xvi, pp. 285-297, with pls. ii and iii, and 1 fig. in the text.

Describes as new *Ectocynodon incisivus*.

1888 CC

Synopsis of the vertebrate fauna of the Puerco series.

Trans. Amer. Philos. Soc., xvi, pp. 298-361, with pls. iv and v, and 11 figs. in the text.

Contains a list of 106 species belonging to the Puerco, of which 18 are described as before unknown.

1888 DD

On the shoulder girdle and extremities of *Eryops*.

Trans. Amer. Philos. Soc., xvi, pp. 362-367, with plate of 4 figs.

Cope, E. D.—Continued. 1888 EE

Schlosser on the Cænozoic marsupials and *Unguiculata*.

Amer. Naturalist, xxii, pp. 163-164.

A review of Schlosser's paper on "Affen, Lemuriden," etc.

1889 A

The age of the Denver formation.

Science, xiii, p. 290.

Discusses "*Bison alticornis*" Marsh.

1889 B

A review of the North American species of *Hippotherium*.

Proc. Amer. Philos. Soc., xxvi, pp. 429-458, with 3 pls.

1889 C

The mechanical causes of the development of the hard parts of the *Mamalia*.

Jour. Morphology, iii, pp. 137-277, with pls. ix-xiv, and 93 cuts in the text.

1889 D

The *Batrachia* of North America.

Bull. U. S. Nat. Mus. No. 34, Washington D. C., 1889, pp. 1-525; pls. i-lxxxvi.

A work on the living *Batrachia* of N. America.

1889 E

Catalogue of fossil *Reptilia* and *Batrachia* of the British Museum, pt. i, by Dr. Lydekker.

Amer. Naturalist, xxiii, p. 43.

A review.

1889 F

The vertebrate fauna of the Equus beds.

Amer. Naturalist, xxiii, pp. 160-165, February, not of March.

List of species found in the different localities and descriptions of *Alces brevitrabalis*, *A. semipalmatus*, and *Cariacus ensifer*.

1889 G

The *Artiodactyla*.

Amer. Naturalist, xxiii, pp. 111-136; pls. iii-vii; woodcuts in the text, 7-21.

Conclusion of Cope, E. D. 1888 X. The pagination is that for March, not that for February.

1889 H

Brongniart and Doederlein on *Xenacanthini*.

Amer. Naturalist, xxiii, pp. 149-150.

1889 I

The *Vertebrata* of the Swift Current River. II.

Amer. Naturalist, xxiii, pp. 151-155.

Genus *Haplacodon* established for *Menodus angustigenis*, *Anchitherium westoni*, *Hypertragalus transversus*, *Leptomeryx esulcatus*, *L. mamifer*, and *L. semicinctus* described.

Cope, E. D.—Continued. 1889 J

The *Proboscidea*.

Amer. Naturalist, xxiii, pp. 191-211; 9 woodcuts; pls. ix-xvi.

Largely reproduced in Geological Magazine of London (3), vol. vi, 1889, pp. 438-448.

1889 K

An intermediate Pliocene fauna.

Amer. Naturalist, xxiii, pp. 253-254.

A short list of fossil vertebrates found in a lake deposit in Oregon, and a description of *Hippotherium relictum*.

1889 L

Marsh on Cretaceous mammals.

Amer. Naturalist, xxiii, pp. 490-491.

Review of Marsh, O. C. 1889 D and Marsh, O. C. 1889 F.

1889 M

On a species of *Plioparchus* from Oregon.

Amer. Naturalist, xxiii, pp. 625-626.

Description of *P. septemspinus*.

1889 N

On a new genus of Triassic *Dinosauria*.

Amer. Naturalist, xxiii, p. 626.

Genus *Calophysus* established for *Cæurus longicollis*, *C. bauri*, and *C. willistoni*.

1889 O

Vertebrata of Swift Current River. No. III.

Amer. Naturalist, xxiii, pp. 628-629.

1889 P

The *Edentata* of North America.

Amer. Naturalist, xxiii, pp. 657-664, with pls. xxxi, xxxii and 2 woodcuts in the text.

1889 Q

The horned *Dinosauria* of the Laramie.

Amer. Naturalist, xxiii, pp. 715-717, pls. xxxiii, xxxiv.

Descriptions of *Monoclonius recurvornis*, *M. sphenocerus*, and *M. fissus*.

1889 R

Synopsis of the families of *Vertebrata*.

Amer. Naturalist, xxiii, pp. 849-877.

1889 S

The Silver Lake of Oregon and its region.

Amer. Naturalist, xxiii, pp. 970-982.

Contains a list of the fossil vertebrates of the region.

1889 T

Notes on the *Dinosauria* of the Laramie.

Amer. Naturalist, xxiii, pp. 904-906.

Describes *Pteropelyx grallipes*, gen. et spec. nov., and *Diclonius pentagonus*.

- Cope, E. D.—Continued.** 1889 U
Mr. Lydekker on *Phenacodus* and the
Atheca.
Nature, xl, p. 298.
- 1890 A
A. Smith Woodward on *Cœlorhynchus*
Agassiz.
Amer. Naturalist, xxiv, pp. 165-166.
- 1890 B
The homologies of the fins of fishes.
Amer. Naturalist, xxiv, pp. 401-423, pls. xiv-
xviii, and 9 woodcuts in the text.
- 1890 C
Scott and Osborn on the fauna of the
Browns Park Eocene.
Amer. Naturalist, xxiv, pp. 470-472.
Review of Scott and Osborn 1890 A.
- 1890 D
[Note on teeth mentioned by Profes-
sor Marsh.]
Amer. Naturalist, xxiv, p. 571.
- 1890 E
The *Cetacea*.
Amer. Naturalist, xxiv, pp. 599-616, pls. xx-
xxiii, and 8 wood cuts in the text.
Besides the general account of the order
there is a list of North American fossil *Cetacea*.
- 1890 F
The extinct *Sirenia*.
Amer. Naturalist, xxiv, pp. 697-702, with pls.
xxv, xxvi, and 3 wood cuts in the text.
- 1890 G
Note on *Castoroides georgiensis* Moore.
Amer. Naturalist, xxiv, p. 772.
Refers the tooth to *Hippopotamus amphibius*.
- 1890 H
Newberry's paleozoic fishes of North
America.
Amer. Naturalist, xxiv, pp. 844-847.
Review of Newberry, J. C. 1889 A.
- 1890 I
On two new species of *Mustelidæ* from
the Loup Fork Miocene of Nebraska.
Amer. Naturalist, xxiv, pp. 950-952.
Describes *Stenogale robusta* and *Brachyopsalis*
pachycephalus.
- 1890 J
On a new dog from the Loup Fork
Miocene.
Amer. Naturalist, xxiv, pp. 1067-1068.
Describes *Elurodon compressus*.
- 1891 A
On *Vertebrata* from the Tertiary and
Cretaceous rocks of the Northwest Ter-
ritory. I. The species from the Oligo-
Bull. 179—5
- Cope, E. D.—Continued.**
cene or Lower Miocene beds of the
Cypress Hills.
Geol. Surv. Canada. Contributions to Cana-
dian Palæontology, iii, pp. i; 1-25, with pls.
i-xiv.
- 1891 B
On the characters of some paleozoic
fishes. I. On a new Elasmobranch from
the Permian; *Styptobasis knightiana* gen.
et spec. nov., fig 1. II. On new ichthy-
odorulites; *Hybodus regularis*, sp. nov.,
fig. 2; *Ctenacanthus amblyxiphias*, sp.
nov., fig. 3. III. On the cranial struc-
ture of *Macropetalichthys*. IV. On the
pectoral limb of the genus *Holonema*,
Newb. V. On the paired fins of *Mega-*
lichthys nitidus, Cope. VI. On the non-
actinopterygian Teleostomi. VII. On
new species of *Platysomidæ*, *Platysomus*
palmaris and *P. lacovianus*.
Proc. U. S. Nat. Museum, xiv, pp. 447-463,
pls. xxviii-xxxiii.
- 1891 C
On the structure of certain paleozoic
fishes.
Proc. Amer. Assoc. Adv. Science, 39th meet-
ing, Indianapolis, 1890, p. 336.
Abstract of paper describing *Macropetalich-*
thys, *Megalichthys nitidus*, a species of *Platyso-*
mus, and a species of *Dendrodus*.
- 1891 D
On two new Perissodactyls from the
White River Neocene.
Amer. Naturalist, xxv, pp. 47-49,
Describes *Menodus pettoceras* and *Cænopus*
simplicidens.
- 1891 E
On the non-actinopterygian *Teleo-*
stomi.
Amer. Naturalist, xxv, pp. 479-481.
- 1891 F
Catalogue of fossil *Reptilia* and *Ba-*
trachia (Amphibia) in the British Mu-
seum. Parts II, III, and IV.
Amer. Naturalist, xxv, pp. 644-646.
A review of the above works of Dr. R.
Lydekker.
- 1891 G
A. S. Woodward's Fossil fishes.
Amer. Naturalist, xxv, pp. 646-647.
An editorial notice of A. D. Woodward's
Catalogue of fossil fishes in the British Mu-
seum.

- Cope, E. D.—Continued.** 1891 H
On some new fishes from South Dakota.
Amer. Naturalist, xxv, pp. 654-658.
Describes three new genera (*Gephyura*, *Probalostomus* and *Oligoparchus*, and five new species.
- 1891 I
Boulenger on *Rhynchocephalia*, *Tes-
tudinata*, and *Crocodylia*.
Amer. Naturalist, xxv, pp. 813-814.
- 1891 J
On the skull of the *Equus excelsus*,
Leidy, from the Equus beds of Texas.
Amer. Naturalist, xxv, pp. 912-913.
- 1891 K
The California cave bear.
Amer. Naturalist, xxv, pp. 997-999, with pl.
xxi.
- 1891 L
Flower and Lydekker's mammals.
Amer. Naturalist, xxv, pp. 1116-1118.
A review of the above authors' work on
mammals.
- 1891 M
Discovery of fish remains in Ordovic-
ian rocks.
Amer. Naturalist, xxv, p. 137.
A brief editorial note regarding C. D. Wal-
cott's discovery of fish remains in Colorado.
- 1891 N
Syllabus of lectures on geology and
palæontology.
Pp. 1-90, with 60 figs. in the text. Philadel-
phia, 1891.
- 1892 A
In the Texas Panhandle.
Amer. Geologist, x, pp. 131-132.
- 1892 B
On a new horizon of fossil fishes.
Proc. Amer. Assoc. Adv. Sci., 40th meeting,
Washington, 1891, p. 285.
Abstract of paper regarding fishes described
from South Dakota in Amer. Naturalist, 1891,
p. 654.
- 1892 C
On the cranial characters of *Equus
excelsus*.
Proc. Amer. Assoc. Adv. Sci., 40th meeting,
Washington, 1891, p. 285. Abstract.
- 1892 D
On a new form of *Marsupialia* from
the Laramie formation.
Proc. Amer. Assoc. Adv. Sci., 41st meeting,
Rochester, 1892, p. 177.
Describes genus *Thlæodon*.
- Cope, E. D.—Continued.** E 1892
Report on the palæontology of the
Vertebrata [of Texas].
Geol. Surv. of Texas, 3d annual report, for
1891. Austin, 1892; pp. 251-259.
- 1892 F
The osteology of the *Lacertilia*.
Proc. Amer. Philos. Soc., xxx, pp. 185-221,
with pls. ii-vi.
- 1892 G
A contribution to a knowledge of the
fauna of the Blanco beds of Texas.
Proc. Acad. Nat. Sci. Phila., 1892, pp. 226-229.
- 1892 H
On the permanent and temporary
dentitions of certain three-toed horses.
Proc. Acad. Nat. Sci. Phila., 1892, pp. 325-326.
- 1892 I
A hyæna and other *Carnivora* from
Texas.
Proc. Acad. Nat. Sci. Phila., 1892, pp. 326-327.
- 1892 J
A contribution to the vertebrate pa-
læontology of Texas.
Proc. Amer. Philos. Soc., xxx, pp. 123-131.
- 1892 K
On the skull of the dinosaurian *Læ-
laps incrassatus* Cope.
Proc. Amer. Philos. Soc., xxx, pp. 240-245.
- 1892 L
On some new and little known Palæ-
ozoic vertebrates.
Proc. Amer. Philos. Soc., xxx, pp. 221-229,
with pls. vii and viii.
- 1892 M
On some points in the kinetogenesis
of limbs.
Proc. Amer. Phil. Soc., xxx, pp. 282-285.
- 1892 N
On the phylogeny of the *Vertebrata*.
Proc. Amer. Philos. Soc., xxx, pp. 278-279,
with 2 figs. in the text.
- 1892 O
Remarks on the communication
"Ein fossiler Giftzahn," by Dr. F.
Kinkelin.
Zoolog. Anzeiger, xv, p. 224.
Refers to discoveries of the poison-fangs of
serpents earlier than Kinkelin's.
- 1892 P
The age of the staked plains of Texas.
Amer. Nat., xxvi, pp. 49-50.
Refers to occurrence of *Equus simplicidens*,
Mastodon, and *Testudo turgida*.

- Cope, E. D.—Continued.** 1892 Q
Fossil *Vertebrata*.
Amer. Nat., xxvi, pp. 89-91.
Abstract of paper read before the American Society of Naturalists at Philadelphia, Dec., 1891.
- 1892 R
The homologies of the cranial arches of the *Reptilia*.
Amer. Nat., xxvi, pp. 407-408, with pls. xv-xvii.
Abstract of paper read before U. S. Nat. Acad. Sciences, Apr. 19, 1892. Full paper in Trans. Amer. Philos. Soc., 1892, pp. 11-16.
- 1892 S
Professor Marsh on extinct horses and other mammals.
Amer. Naturalist, xxvi, pp. 410-412.
Review of Marsh, O. C. 1892 C, and Marsh, O. C. 1892 D.
- 1892 T
Fourth note on the *Dinosauria* of the Laramie.
Amer. Naturalist, xxvi, pp. 756-758.
- 1892 U
On a new genus of *Mammalia* from the Laramie formation.
Amer. Naturalist, xxvi, pp. 758-762; pl. xxii.
Describes *Thlæodon padanicus*, belonging to new family *Thlæodontidae*.
- 1892 V
Crook on *Sauroidontidae* from Kansas.
Amer. Naturalist, xxvi, pp. 941-942.
Notice of Crook, A. R. 1892 A.
- 1892 W
On the permanent and temporary dentitions of certain three-toed horses.
Amer. Naturalist, xxvi, pp. 942-944, pls. xxv, xxvi.
- 1892 X
American Devonian fishes found in Belgium.
Amer. Naturalist, xxvi, p. 1025.
Notice of paper by M. Lohest in Ann. Soc. Géol. de Belgique, xvi, p. lvii.
- 1892 Y
A Hyena and other *Carnivora* from Texas.
Amer. Naturalist, xxvi, pp. 1028-1029.
Describes *Borophagus diversidens*, *Canimartes cumminsi*, and *Felis hillianus*.
- 1892 Z
On the homologies of the posterior cranial arches in the *Reptilia*.
Trans. Amer. Philos. Soc., xvii, pp. 11-26; with pls. i-v.
- Cope, E. D.—Continued.** 1892 AA
Vertebrate fauna of the Alachua clays, Florida.
Bull. U. S. Geol. Surv., No. 84, Correlation papers, Neocene, p. 130.
- 1892 BB
The fauna of the Blanco epoch.
Amer. Naturalist, xxvi, pp. 1058-1059.
- 1893 A
A preliminary report on the vertebrate paleontology of the Llano Estacado.
From 4th Annual Report of the Geological Survey of Texas, pp. 1-136; pls. i-xxiii.
Notice of, in Amer. Naturalist, vol. xxvii, pp. 811-812.
- 1893 B
A new extinct species of *Cyprinidae*.
Proc. Acad. Nat. Sci. Phila., 1893, pp. 19-20.
Describes *Apheticichthys lindahli* from Illinois.
- 1893 C
Description of the lower jaw of *Tetralodon shepardii*.
Proc. Acad. Nat. Sci. Phila., 1893, pp. 202-204.
- 1893 D
Fossil fishes from British Columbia.
Proc. Acad. Nat. Sci. Phila., 1893, pp. 401-402.
- 1893 E
On the genus *Tomioipsis*.
Proc. Amer. Philos. Soc. xxxi, pp. 317-318.
- 1893 F
Kansas pterodactyls.
Amer. Naturalist, xxvii, p. 37.
A notice of a paper on the subject by Professor Williston, in Kansas Univ. Quarterly, July, 1892.
- 1893 G
A remarkable artiodactyle from the White River epoch.
Amer. Naturalist, xxvii, pp. 147-148, pl. i, ii.
Notice of paper Osborn and Wortman 1892 B.
- 1893 H
Earle on the species of *Coryphodontidae*.
Amer. Naturalist, xxvii, pp. 250-252.
Review of Earle, Charles, 1892 A.
- 1893 I
The vertebrate fauna of the Ordovician of Colorado.
Amer. Naturalist, xxvii, pp. 268-269.
Notice of discoveries of fish remains by C. D. Walcott.
- 1893 J
The genealogy of man.
Amer. Naturalist, xxvii, pp. 321-335, pl. ix, and 9 figs. in the text.

Cope, E. D.—Continued. 1893 K
A new Pleistocene saber-tooth.
Amer. Naturalist, xxvii, pp. 896-897.
Describes *Dinobastis serus*.

1893 L
On *Symmorium* and the position of
the cladodont sharks.

Amer. Naturalist, xxvii, pp. 999-1001.

1893 M
Forsyth Major, and Röse on the
theory of dental evolution.

Amer. Naturalist, xxvii, pp. 1014-1016.

1893 N
Fritsch's Fauna of the Gaskohle of
Bohemia.

Amer. Naturalist, xxvii, pp. 1079-1081, with
pls. xix, xx, and 1 fig. in the text.

One plate and the text figure illustrate *Xenacanthus decheni*.

1893 O
Cladodont sharks of the Cleveland
shale.

Amer. Naturalist, xxvii, p. 1083.

An editorial notice of Professor Claypole's
paper in Amer. Geologist for May, 1893.

1893 P
Geology and paleontology, Cenozoic.
Amer. Naturalist, xxvii, p. 473, with pl. xii.
Announces exhibition of mandible of *Tetraclodon shepardii* and proposal of *Mastodon oligobunus*.

1893 Q
The vertebrate paleontology of the
Llano Estacado.

Amer. Naturalist, xxvii, pp. 811, 812.

A notice of the author's report (Cope, E. D.
1893 A), on the palæontology of Texas.

1893 R
Cary on evolution of foot structure.
Amer. Naturalist, xxvii, pp. 248-250.

1894 A
Observations on the geology of adja-
cent parts of Oklahoma and northwest
Texas.

Proc. Acad. Nat. Sci. Phila., 1894, pp. 63-68.

1894 B
On the structure of the skull in the
plesiosaurian *Reptilia* and on two new
species from the upper Cretaceous.

Proc. Amer. Philos. Soc., xxxiii, pp. 109-113,
with pl. x and 1 fig. in the text.

Describes *Embaphias circulosus* gen. et sp.
nov. and *Elasmosaurus intermedius*.

1894 C
Seeley on the fossil reptiles: II. *Pa-
reiasaurus*; VI. The *Anomodontia* and

Cope, E. D.—Continued.
their allies; VII. Further observations
on *Pareiasaurus*.

Amer. Naturalist, xxviii, pp. 788-790.

A review of Seeley's papers on the above sub-
jects in Philos. Trans. Roy. Soc., 1888, 1889.

1894 D
Scott on the *Mammalia* of the Deep
River Beds.

Amer. Naturalist, xxviii, pp. 790-791.

A review of Scott's memoir in Trans. Amer.
Philos. Soc., xviii, pp. 55-184.

1894 E
Marsh on Tertiary *Artiodactyla*.
Amer. Naturalist, xxviii, pp. 867-869.
A review of Marsh, O. C. 1894 K.

1894 F
New and little known Paleozoic and
Mesozoic fishes.

Jour. Acad. Nat. Sci. Phila., (2), ix, pp. 427-
448; pls. xviii-xx, with 5 figs. in the text.

1894 G
On *Cyphornis*, an extinct genus of
birds.

Jour. Acad. Nat. Sci. Phila., (2), ix, pp. 449-
452; pl. xx, 11-16.

Describes *Cyphornis magnus*, gen. et sp. nov.,
from Vancouvers Island.

1894 H
Extinct *Bovidæ*, *Canidæ*, and *Felidæ*
from the Pleistocene of the Plains.

Jour. Acad. Nat. Sci. Phila., (2), ix, pp. 453-
459; pls. xxi-xxii.

1894 I
Schlosser on American Eocene *Ver-
tebrata* in Europe.

Amer. Naturalist, xxviii, pp. 594-595.

A review of Schlosser 1894 A.

1895 A
Fourth contribution to the marine
fauna of the Miocene period of the
United States.

Proc. Amer. Philos. Soc., xxxiv, pp. 135-155,
with pl. vi.

Note on, in Amer. Naturalist, vol. xxix,
p. 572.

1895 B
Dean on coprolites.
Amer. Naturalist, xxix, p. 159.
Remarks on Bashford Dean's paper in Trans.
N. Y. Acad. Sci., vol. xiii, 1894.

1895 C
Baur on the temporal part of the
skull, and on the morphology of the
skull in the *Mosasauridæ*.

Amer. Naturalist, xxix, pp. 558-559; pl. xxxi.

Review of Baur's papers in Anatomischer
Anzeiger, x, p. 316, and Amer. Jour. Morphol-
ogy, 1894, p. 1.

- Cope, E. D.—Continued.** 1895 D
A batrachian armadillo.
Amer. Naturalist, xxix, p. 998.
Description of *Dissorhophus multicinctus*.
- 1895 E
Reply to Dr. Baur's critique on my paper on the paroccipital bone of the scaled reptiles and the systematic position of the *Pythonomorpha*.
Amer. Naturalist, xxix, pp. 1003-1005.
- 1895 F
The fossil vertebrates from the fissure at Port Kennedy, Pa.
Proc. Acad. Nat. Sci. Phila., 1895, pp. 446-451.
- 1895 G
The antiquity of man in North America.
Amer. Naturalist, xxix, pp. 593-599.
Discusses the occurrence of various mammals in caves and other Pleistocene deposits.
- 1895 H
Taylor on box tortoises.
Amer. Naturalist, xxix, pp. 756-757.
Subdivides the genus *Terrapene* into various genera, among which is *Tocaspis*.
- 1896 A
Criticism of Dr. Baur's rejoinder on the homologies of the paroccipital bone, etc.
Amer. Naturalist, xxx, pp. 147-149, with 2 figs. in the text.
- 1896 B
Boulenger on the difference between *Lacertilia* and *Ophidia*; and on the *Apoda*.
Amer. Naturalist, xxx, pp. 149-152.
- 1896 C
The Paleozoic reptilian order *Cotylosauria*.
Amer. Naturalist, xxx, pp. 301-304, with pl. vii a.
Describes *Pariotichius aguti*.
- 1896 D
The ancestry of the *Testudinata*.
Amer. Naturalist, xxx, pp. 398-400.
Describes new family *Otocalidae*, new genera *Otocalus* and *Conodectes*, and new species *O. testudineus* and *C. favosus*.
- 1896 E
Permian land *Vertebrata* with carapaces.
Amer. Naturalist, xxx, pp. 936-937, with pls. xxi, xxii.
Descriptions and figures of *Otocalus testudineus* and *Dissorhophus articulatus*.
- 1896 F
New and little known *Mammalia* from the Port Kennedy bone deposit.
Proc. Acad. Nat. Sci. Phila., 1896, pp. 378-394.
- Cope, E. D.—Continued.** 1896 G
The reptilian order *Cotylosauria*.
Proc. Amer. Philos. Soc., xxxiv, pp. 436-457, with pls. vii-ix.
Besides the *Cotylosauria*, some new *Batrachia* from the Permian beds of Texas are described in a supplement, pp. 452-457.
- 1896 H
On some Pleistocene *Mammalia* from Petite Anse, La.
Proc. Amer. Philos. Soc., xxxiv, pp. 458-468, with pls. x-xii.
- 1896 I
Second contribution to the history of the *Cotylosauria*.
Proc. Amer. Philos. Soc., xxxv, pp. 122-139, with pls. vii-x.
Included in this paper is an "Appendix on a species of *Trimerorhachis*." The paper is a continuation of Cope, 1896 G.
- 1896 J
Sixth contribution to the knowledge of the marine Miocene fauna of North America.
Proc. Amer. Philos. Soc., xxxv, pp. 139-146, with pls. xi, xii.
- 1897 A
Recent papers relating to vertebrate paleontology.
Amer. Naturalist, xxxi, pp. 315-323.
A notice of papers by Baur, Baur and Case, Goette, Hay, Wortman, and Marsh.
- 1897 B
The position of the *Periptychidae*.
Amer. Naturalist, xxxi, pp. 335-336.
Reviewed by M. Schlosser, Neues Jahrb. Min., 1901, i, p. 149.
- 1897 C
On new Paleozoic *Vertebrata* from Illinois, Ohio, and Pennsylvania.
Proc. Amer. Philos. Soc., xxxvi, pp. 71-90, with pls. i-iii.
- 1898 A
[A communication written Oct. 28, 1870, to Prof. B. F. Mudge.]
The University Geological Survey of Kansas, iv, pp. 29-30.
This letter, now first published, refers to a collection of fossils which had been submitted to Prof. Cope for examination.
- 1898 B
Syllabus of lectures on the *Vertebrata*.
Philadelphia, 1898. 8 vo., pp. 1-135, with portrait of the author and 66 figs. in the text; preceded by an essay by Dr. H. F. Osborn on "The life and works of Cope."
- 1899 A
Vertebrate remains from Port Kennedy bone deposit.
Jour. Acad. Nat. Sci. Phila., (2), xi, pp. 193-267, with pls. xviii-xxi.

- Cope, E. D.**—Continued. 1900 A
The crocodilians, lizards, and snakes of North America.
Ann. Report Smithsonian. Inst. for 1898, U. S. Nat. Museum, part ii, pp. 153-1270, with pls. i-xxxv and 347 figs. in the text.
- Cope, E. D., and Wortman, J. L.** 1884 A
Post-pliocene vertebrates of Indiana.
14th Report State Geologist of Indiana, pt. ii, pp. 1-62, with pls. i-vi.
- Cornevin, Charles.** 1882 A
Nouveaux cas de didactylie chez le cheval et enterprétation de le polydactylie des Équidés en général.
Assoc. Française pour l'avancement des Sciences, 10e session, Alger, 1881, pp. 669-675.
- Cornuel, J.** 1877 A
Description de débris de poissons fossiles provenant principalement du calcaire néocomien du département de la Haute Marne.
Bull. Soc. Géol. France (3), v, pp. 604-626, with pl. xi.
- Cottle, Thomas.** 1852 A
Fossil *Pachydermata* in Canada.
Ann. and Mag. Nat. Hist. (2), x, pp. 395-396.
Records the finding of bones and tusk of *Elephas primigenius*, Burlington Heights, near head of Lake Ontario.
- 1853 A
On fossil *Pachydermatu* in Canada.
Amer. Jour. Sci. (2), xv, pp. 282-283.
Taken from Ann. and Mag. Nat. Hist. (2), x, 395.
- Coues, Elliott.** 1866 A
The osteology of the *Colymbus torquatus*, with notes on its myology.
Memoirs Bost. Soc. Nat. Hist., i, pp. 131-172, with pl. v.
- 1869 A
The great auk.
Amer. Naturalist, iv, p. 57.
- 1872 A
Osteology and myology of *Didelphys virginiana*.
Memoirs Bost. Soc. Nat. Hist., ii, pp. 41-149, with 35 figs. in the text.
- 1872 B
Key to North American birds.
Pp. 1-361, with 6 pls. and 238 figs. in the text.
A synopsis of the fossil forms of North American birds is given on pp. 347-350.
- 1875 A
On the cranial and dental characters of *Mephitis*, with descriptions of *Mephitis frontata* n. sp. foss.
Bull. U. S. Geol. and Geog. Surv. Terr., 2d ser., No. 1, pp. 7-15.
- Coues, Elliott**—Continued. 1875 B
A critical review of the North American *Sacomys*.
Proc. Acad. Nat. Sci. Phila., xxvii, pp. 272-327.
- 1875 C
Synopsis of the *Geomyidae*.
Proc. Acad. Nat. Sci. Phila., xxvii, pp. 130-138.
- 1876 A
Some account, critical, descriptive, and historical, of *Zapus hudsonius*.
Bull. U. S. Geol. and Geog. Surv. Terr. (Hayden), i, ser. 2, No. 5, pp. 253-262.
Gives full synonymy and dental and cranial characters.
- 1877 A
Fur-bearing animals; a monograph of the North American *Mustelidae*.
Miscellaneous pubs., No. 8, U. S. Geol. and Geog. Surv., under F. V. Hayden, pp. i-xiv; 1-348, with pls. i-xx.
- 1877 B
Monographs of North American *Rodentia*.
Report U. S. Geol. and Geog. Surv. Terr., F.V. Hayden, U. S. geologist in charge, vol. xi.
No. i, *Muridae*, pp. 1-264, with pls. i-v; No. vii, *Zapodidae*, pp. 455-479; No. viii, *Sacomys*, pp. 481-542; No. x, *Geomyidae*, pp. 601-630.
- 1878 A
On consolidation of the hoofs in the Virginian deer.
Bull. U. S. Geol. and Geog. Surv. Terr., 1878, iv, pp. 293-294.
- 1878 B
On a breed of solid-hoofed pigs apparently established in Texas.
Bull. U. S. Geol. and Geog. Surv. Terr., 1878, iv, pp. 295-297.
- 1884 A
Key to North American birds. 2d edition.
Pp. i-xxx; 1-863, with 561 figs. in the text.
Part ii of this work contains an excellent account of the anatomy of birds, including the osteology. Part iv is a "Systematic Synopsis of the Fossil Birds of America." This synopsis has remained unchanged in the 3d and 4th editions and the various reissues of these up to 1896.
- See also **Gill and Coues**.
- Couper, J. Hamilton.** 1842 A
Letter regarding fossil bones found in Georgia.
Proc. Acad. Nat. Sci. Phila., i, pp. 216-217.
Records finding of bones of *Megatherium*, *Mastodon*, a species of *Bos*, etc. A list of these bones is found on page 190 of the same volume.

Couper, J. Hamilton—Continued.

See note under Hodson W. B. 1846 A.

Cox, E. T. 1874 A

Collettosaurus indianaensis Cox.

Fifth Ann. Rep. Geol. Surv. Indiana, made during the year 1873, pp. 247-248, with 1 pl.

Cragin, F. W. 1888 A

Preliminary description of a new or little known saurian from the Benton of Kansas.

Amer. Geologist, ii, pp. 404-407.

Trinacromerum bentonianum is described.

1891 A

New observations on the genus *Trinacromerum*.

Amer. Geologist, viii, pp. 171-174.

1892 A

Observations on llama remains from Colorado and Kansas.

Amer. Geologist, ix, pp. 257-260.

1892 B

A new saber-toothed tiger from the Loup Fork Tertiary of Kansas.

Science, xix, p. 17.

Describes *Machærodus crassidens*.

1894 A

Vertebrates from the Neocomian shales of Kansas.

Colorado College Studies, v, pp. 69-73, pls. i, ii.

Describes as new species *Plesiosaurus mudgei*, *Plesiochelys belviderensis*, *Lamna* ? *quinquelatralis*, and *Hybodus clarkensis*.

1896 A

Preliminary notice of three late Neocene terranes of Kansas.

Colorado College Studies, vi, pp. 53-54.

Records finding of various vertebrate remains, among which are named *Elephas imperator* (?), *Megalonyx leidyi*, *Equus complicatus*, *E. curvidens*, *Auchenia huerfanensis*.

1899 A

Goat-antelope from the cave fauna of Pikes Peak region.

Bull. Geol. Soc. Amer., xi, pp. 610-612, with pl. lvii.

Presents a description of *Nemorhædus palmeri* Crag.

1900 A

The capricorns, mammals of an Asiatic type, former inhabitants of the Pikes Peak region.

Colorado College Studies, viii, pp. 1-6, with 1 text fig.

A popular account of *Nemorhædus palmeri* Crag.

Cramer, Frank.

1895 A

On the cranial characters of the genus *Sebastodes*.

Proc. California Acad. Sci. (2), v, pp. 573-610, with pls. lviii-lxx.

The plates consist of drawings of skulls of the different species.

Credner, Hermann.

1870 A

Die Kreide von New Jersey.

Zeitschrift deutsch. geol. Gesellschaft, xxi, pp. 191-251, with map.

Mentions occurrence of *Otodus appendiculatus*, *Corax heterodon*, *Oxyrhina mantelli*, *Lamna texana*, *Coprolithus* (*Macropoma*) *mantelli*, *Hyposaurus rogersi*, *Hadrosaurus foulkii*, and *Mosasauros mitchelli*.

1881 A

Die Stegocephalen (Labyrinthodonten) aus dem Rothliegenden des Plauen'schen Grundes bei Dresden.

Zeitschr. deutsch. geol. Gesellsch., xxxiii; Erster Theil, pp. 298-330, pls. xv-xviii; Zweiter Theil, pp. 574-603, pls. xxii-xxiv. Describes *Branchiosaurus*.

1881 B

Ueber einige Stegocephalen (Labyrinthodonten) aus dem sächsischen Rothliegenden.

Sitzungsber. naturf. Gesellsch. Leipzig, 1881, pp. 1-7.

Contains some remarks on *Branchiosaurus*.

1882 A

Die Stegocephalen aus dem Rothliegenden des Plauen'schen Grundes bei Dresden; iii Theil.

Zeitschr. deutsch. geol. Gesellsch., xxxiv, pp. 213-237, with pls. xii, xiii.

Describes *Pelosaurus* and *Archegosaurus*.

1883 A

Die Stegocephalen aus dem Rothliegenden des Plauen'schen Grundes bei Dresden; iv Theil.

Zeitschr. deutsch. geol. Gesellsch., xxxv, pp. 275-300, with pls. xi, xii.

1884 A

[Remarks on *Branchiosaurus amblystomus*.]

Zeitschr. deutsch. geol. Gesellsch., xxxvi, pp. 685-686.

Regards *Branchiosaurus* as equivalent to *Protriton*, but retains former name.

1885 A

Die Stegocephalen aus dem Rothliegenden des Plauen'schen Grundes bei Dresden.

Zeitschr. deutsch. geol. Gesellsch., xxxvii, pp. 694-736, with pls. xxvii-xxix.

Treats of *Melanerpeton*, *Pelosaurus*, *Archegosaurus*, *Hylonomus*, etc.

- Credner, Hermann**—Continued. 1886 A
Die Stegocephalen aus dem Rothliegenden des Plauen'schen Grundes bei Dresden.
Zeitschr. der deutsch. geol. Gesellsch., xxxviii, pp. 576-632, with pls. xvi-xix and 13 figs. in the text.
Treats of the development of *Branchiosaurus*.
- 1887 A
Stegocephalen des Rothliegenden.
Two plates, 70 by 90 cm., with "Erläuterungen zu den Wandtafeln; Stegocephalen des Rothliegenden."
Pp. 1-10, with 3 figs. in the text.
Presents illustrations of the structure of *Branchiosaurus*, *Pelosaurus*, and *Melanerpeton*.
- 1888 A
Die Stegocephalen und Saurier aus dem Rothliegenden des Plauen'schen Grundes bei Dresden; vii Theil; *Palæohatteria longicaudata* Crd.
Zeitschr. deutsch. geol. Gesellsch., xl, pp. 490-558, with pls. xxiv-xxvi and 24 text figs.
- 1889 A
Die Stegocephalen und Saurier aus dem Rothliegenden des Plauen'schen Grundes bei Dresden; viii Theil.
Kadaliosaurus priscus Cred.
Zeitschr. deutsch. geol. Gesellsch., xli, pp. 319-342, with pl. xv and 5 text figs.
- 1890 A
Die Stegocephalen und Saurier aus dem Rothliegenden des Plauen'schen Grundes bei Dresden; ix Theil.
Zeitschr. deutsch. geol. Gesellsch., xlii, pp. 240-277, with pls. ix-xi and 6 text figs.
Describes *Hylononius* and *Petrobates*.
- 1893 A
Zur Histologie der Faltenzähne paläozoischer Stegocephalen.
Abhandl. math.-phys. Classe k. sächs. Gesellsch. Wissensch. Leipzig, xx, pp. 477-552, with pls. i-iv and 5 text figs.
This important paper treats of the histology of the genus *Sclerocephalus*.
- Crook, Alja Robinson.** 1892 A
Ueber einige fossile Knochenfische aus der mittleren Kreide von Kansas.
Paläontographica, xxxix, pp. 107-124, with pls. xv-xviii.
- Croom, H. B.** 1835 A
Some account of the organic remains found in the marl pits of Lucas Ben-
ners, esq., in Craven County, N. C.
Amer. Jour. Sci., xxvii, pp. 168-171.
- Cunningham, John.** 1839 A
An account of the footsteps of the *Chirotherium*.
Proc. Geol. Soc. Lond., iii, pp. 12-14.
- Cunningham, Robt. O.** 1871 A
Notes on some points in the osteology of *Rhea americana* and *Rhea darwini*.
Proc. Zool. Soc. Lond., 1871, pp. 105-110, with pls. vi and vi a.
- Cuvier, Georges.** 1799 A
Mémoire sur les espèces d'éléphants vivants et fossiles.
Mém. de l'Institut Nat. Sci. et Arts, ii, pp. 1-22, pls. ii-vi.
- 1804 A
Sur le Mégalonix, animal de la famille des Paresseux, mais de la taille de bœuf, dont les ossements ont été découvertes en Virginie, en 1796.
Ann. Mus. d'Hist. Nat., v, pp. 358-376, with pl. xxiii.
- 1804 B
Sur le *Megatherium*, autre animal de la famille des Paresseux, mais de la taille du rhinocéros, dont un squelette fossile presque complet est conservé au cabinet royal d'histoire naturelle à Madrid.
Ann. Mus. d'Hist. Nat., v, pp. 376-387, with pls. xxiv, xxv.
- 1806 A
Sur les elephans vivants et fossiles.
Ann. Mus. d'Hist. Nat., viii, pp. 1-58, 93-155, 249-269, with pls. xxxviii-xlv.
- 1806 B
Sur le grand mastodonte.
Ann. Mus. d'Hist. Nat., viii, pp. 270-312, with pls. xlix-lvi.
- 1806 C
Sur différentes dents du genre des mastodontes, mais d'espèces moindres que celles de l'Ohio, trouvées en plusieurs lieux des deux continens.
Ann. Mus. d'Hist. Nat., viii, pp. 401-420, with pls. lxvi-lxix.
- 1808 A
Sur le grand animal des carrières de Maestricht.
Ann. Mus. d'Hist. Nat., Paris, xii, pp. 145-178, with pls. xviii, xix.
- 1808 B
Sur les os fossiles de ruminans trouvés dans les terrains meubles.
Ann. Mus. d'Hist. Nat., Paris, xii, pp. 333-398, with pls. xxxii-xxxiv.
Refers to and figures *Bison latifrons* under the name Aurochs.

Cuvier, Georges—Continued. 1834 A
Recherches sur les ossemens fossiles, ou l'on rétablit les caractères de plusieurs animaux dont les révolutions du globe ont détruit les espèces.

Fourth edition, Paris, 1834-1836, vols. i-x, octavo, with 2 vols. quarto, containing 260 pls.

First edition was published in 1812, second edition in 1821, third edition in 1825.

Daily State Journal. 1870 A
Discovery of a mastodon.

Amer. Jour. Sci. (2), 1, pp. 422-423.

Extract from Daily State Journal, Springfield, Ill.

Dall, William H. 1869 A
[Statement concerning the finding of the bones of musk ox, buffalo, and elephant near Yukon River.]

Proc. Boston Soc. Nat. Hist., xiii, p. 136.

1873 A
[Remarks on tusks and bones from Kotzebue Sound.]

Proc. California Acad. Nat. Sci., iv, pp. 293-294.

1891 A
Age of the Peace Creek bone beds of Florida.

Proc. Acad. Nat. Sci. Phila., 1891, p. 121.

Dames, W. 1882 A
On the structure of the head of *Archæopteryx*.

Geol. Magazine (2) ix, pp. 566-568.

See also Sitzungsber. k.-p. Akad. Wissensch. Berlin, Jahrg. 1882, pp. 817-819.

1883 A
Ueber *Ancistrodon* Debey.

Zeitschr. deutsch. geol. Gesellsch., xxxv, pp. 655-670, with pl. xix.

1883 B
Ueber eine tertiäre Wirbelthierfauna von der westlichen Insel der Birket-el-Qurūn, im Fajcim (Aegypten).

Sitzungsber. k.-p. Akad. Wissensch. Berlin, pp. 129-153, with pl. iii.

1884 A
Entgegnung an Herrn Dr. Baur.

Morpholog. Jahrbuch, x, pp. 603-612.

Reply to Baur, G. 1884 B.

1884 B
Ueber *Archæopteryx*.

Paläontolog. Abhandl., ii, pp. 117-196 (1-80), with 1 pl. and 5 woodcuts.

1885 A
[Review of A. von Koenen's "Beiträge zur Kenntniss der Placodermen des Norddeutschen Oberdevons," pub-

Dames, W.—Continued. 1885 A
lished in Abhandlungen der k. (Gesellsch. Wissensch. Göttingen, xxx, pp. 1-40.)

Neues Jahrbuch Min., Geol., u. Paläont., 1885, i, Referate, pp. 97-98.

1887 A
Ueber die Gattung *Saurodon*.

Sitz.-Ber. Gesellsch. naturforsch. Freunde Berlin, 1887, pp. 72-78.

1887 B
Über *Titanichthys pharao*, nov. gen., nov. sp., aus der Kreideformation Aegyptens.

Sitz.-Ber. Gesellsch. naturforsch. Freunde Berlin, 1887, pp. 69-72, with 4 figs. in the text. Discusses systematic position of *Enchodus*.

1893 A
Ueber das Vorkommen von Ichthyopterygiern im Tithon Argentinien.

Zeitschr. deutsch. geol. Gesellsch., xiv, pp. 23-33, with pl. i.

1894 A
Die Chelonier der norddeutschen Tertiärformation.

Paläontolog. Abhandl., vi, pp. 197-220, with pls. xxvi-xxix.

1894 B
Ueber Zeuglodonten aus Aegypten und die Beziehungen der Archæoceten zu den übrigen Cetaceen. I, Beschreibung der Fossilreste; II, Vergleich der ägyptischen Zeuglodon-Reste mit denen anderer Gebiete; III, die Stellung der Zeuglodonten im System der Säugethiere; IV, Ueber den Hautpanzer der Zeuglodonten.

Paläontolog. Abhandl. (2) i (v), pp. 1-36, with pls. i-vii (xxx-xxxvii).

1895 A
Die Plesiosaurier der süddeutschen Liasformation.

Abhandl. k. Akad. Wissensch. Berlin, 1895, phys.-math. Cl., Abhandl., ii, pp. 1-83, pls. i-v, and 4 figs. in the text.

1895 B
Ueber die Ichthyopterygier der Triasformation.

Sitz.-ber. k.-p. Akad. Wissensch. Berlin, 1895, pp. 1045-1050.

1897 A
Ueber Brustbein, Schulter-und Beckengürtel der *Archæopteryx*.

Sitz.-ber. k.-p. Akad. Wissensch. zu Berlin, 1897, pp. 813-834, with 3 figs. in the text.

Dana, E. S.

See **Grinnell and Dana**.

Dana, James D. 1875 A

On Dr. Koch's evidence with regard to the contemporaneity of man and the mastodon in Missouri.

Amer. Jour. Sci. (3), ix, pp. 335-346.

1875 B

Supplement to the article on Dr. Koch's evidence with regard to the contemporaneity of man and the mastodon.

Amer. Jour. Sci. (3), ix, p. 398.

1875 C

Reindeers in southern New England.

Amer. Jour. Sci. (3), x, pp. 353-357.

1876 A

The *Vertebrata* of the Cretaceous formations of the West, by E. D. Cope.

Amer. Jour. Sci. (3), xi, pp. 65-66.

Notice and criticism of Professor Cope's work.

1879 A

Review of J. D. Whitney's "Auriferous Gravels of the Sierra Nevada and California."

Amer. Jour. Sci. (3), xviii, 233-234.

1888 A

Notice of Dr. J. S. Newberry's "Descriptions of new fossil fishes," published in Trans. N. Y. Academy of Sciences, vol. vi.

Amer. Jour. Sci. (3), xxxv, p. 498.

1896 A

Manual of Geology; treating of the principles of the science with special reference to American geological history, etc.

Fourth edition, pp. 1-1087, with over 1,575 figs. in the text and 2 double-page maps. The first edition of this work was published in 1863; the second, 1876; the third, 1880.

Dareste, Camille.

1849 A

Observations sur l'ostéologie du poisson appelé Triodon macroptère.

Ann. Sci. Naturelles (3), xii, pp. 68-83, with pl. i.

1872 A

Études sur les types ostéologiques des poissons osseux.

Comptes rend. Acad. Paris, lxxv, pp. 942-946; 1018-1021; 1086-1089; 1172-1175; 1253-1256.

Davidoff, M.

1880 A

Ueber das Skelett der hinteren Gliedmasse der *Ganoidei holostei* und der physostomen Knochenfische.

Morpholog. Jahrbuch, vi, pp. 125-128.

Davidoff, M.—Continued.

1880 B

Beiträge zur vergleichenden Anatomie der hinteren Gliedmasse der Fische.

Morpholog. Jahrbuch, vi, pp. 433-468, with pls. xxi-xxiii.

Discusses the structure of the ventral fins of the Ganoids and Physostomi.

1883 A

Beiträge zur vergleichenden Anatomie der hinteren Gliedmasse der Fische. III Theil, *Ceratodus*.

Morpholog. Jahrbuch, ix, pp. 117-162, with pls. viii and ix.

Davies, A. M.

See **Howes and Davies**.

Davies, William.

1872 A

On the rostral prolongations of *Squaloraja polyspondyla*, Ag.

Geol. Magazine (1), ix, pp. 145-150, with pl. iv.

1878 A

On the nomenclature of *Sauropsilus lanciformis* of the British Cretaceous deposits, with description and figures of a new species (*S. woodwardii*).

Geol. Magazine, (2), v, pp. 254-262, with pl. viii.

1886 A

A note on Professor Cope's "*Edestus* and *Pelecopterus*," etc.

Geol. Magazine (3), iii, pp. 141-142.

A reply to a note by Professor Cope which appears on p. 141 of the same volume.

Davis, Chas. H. S.

1887 A

The *Catopterus gracilis*.

Trans. Sci. Assoc. Meriden, Conn., ii, pp. 21-22, with 1 fig. in the text.

Davis, James W.

1880 A

On the Teleostean affinities of the genus *Pleuracanthus*.

Ann. and Mag. Nat. Hist. (5), v, pp. 349-357.

1880 B

On the genus *Pleuracanthus*, Agass., including the genera *Orthacanthus*, Agass. and Goldfuss; *Diplodus*, Agass., and *Xenacanthus*, Beyr.

Quart. Jour. Geol. Soc., xxxvi, pp. 321-336, with pl. xii and 10 text figs.

1881 A

On the genera *Ctenoptychius*, Agassiz; *Ctenopetatus*, Agassiz; and *Harpacodus*, Agassiz.

Ann. and Mag. Nat. Hist. (5), viii, pp. 424-427.

Davis, James W.—Continued. 1882 A
On the zoological position of the genus *Petalorhynchus* Ag., a fossil fish from the Mountain limestone.
Report Brit. Assoc. Adv. Sci., 51st meeting, York, 1881, p. 646.

1882 B
Notes on the occurrence of fossil-fish remains in the Carboniferous limestone series of Yorkshire.
Proc. Yorkshire Geol. and Polytech. Soc. (2), viii, pp. 39-63.

1883 A
On the fossil fishes of the Carboniferous limestone series of Great Britain.
Trans. Roy. Dublin Soc. (2), i, pp. 327-548, with pls. xlii-lxv.

1885 A
Note on *Chlamydoselachus*.
Proc. Yorkshire Geol. and Polytech. Soc. (2), ix, pp. 98-113, with pl. xi.
Diplodus, *Didymodus*, *Pleuracanthus*, *Cladodus*.

1886 A
Notes on a collection of fossil-fish remains from the Mountain limestone of Derbyshire.
Geol. Magazine (3), iii, pp. 148-157.
Discusses relationship of *Xystrodus* to *Tomodus*.

1887 A
Note on a fossil species of *Chlamydoselachus*.
Proc. Zool. Soc. Lond., 1887, pp. 542-544.

1887 B
On *Chondrosteus acipenseroides*, Agassiz.
Quart. Jour. Geol. Soc., xliii, pp. 605-616, with pl. xxiii.

1887 C
The fossil fishes of the chalk of Mount Lebanon, in Syria.
Trans. Roy. Dublin Soc. (2), iii, pp. 457-636, with pls. xiv-xxxviii.

1888 A
On fossil-fish remains from the Tertiary and Cretaceous-Tertiary formations of New Zealand.
Trans. Roy. Dublin Soc. (2), iv, pp. 1-48, with pls. i-vii.

1890 A
On the fossil fish of the Cretaceous formations of Scandinavia.
Trans. Roy. Dublin Soc. (2), iv, pp. 363-434, with pls. xxxviii-xlvi.

Davis, James W.—Continued. 1890 B
On the dentition of *Pleuroplax* (*Pleuroodus*), A. S. Woodward.
Ann. and Mag. Nat. Hist. (6), v, pp. 291-294, with pl. xiii.

1892 A
On the fossil-fish remains of the Coal-measures of the British Islands. Part I. *Pleuracanthidæ*.
Trans. Roy. Dublin Soc. (2), iv, pp. 703-748, with pls. lxxv-lxxiii.
Pleuracanthus, *Orthacanthus*, *Xenacanthus*, *Compsacanthus*, *Diplodus*, and *Didymodus* are regarded as synonymous.

1894 A
On the fossil-fish remains of the Coal-measures of the British Islands. Part II. *Acanthodidæ*.
Trans. Roy. Dublin Soc. (2), v, pp. 249-258, with pls. xxvii-xxix.

Davison, Charles. 1894 A
On deposits from snowdrift, with especial reference to the origin of the loess and the preservation of mammoth remains.
Quart. Jour. Geol. Soc., i, pp. 472-487.

Dawkins, W. Boyd. 1870 A
Fossil mammals in North America.
Nature, ii, pp. 119-120; 232-233.
A review of Dr. Leidy's "The extinct mammalian fauna of Dakota and Nebraska."

1871 A
Geology of Oxford.
Nature, v, pp. 145-149, with 6 woodcuts.
A review of Prof. John Phillips's "Geology of Oxford and the Valley of the Thames."

1872 A
The British Pleistocene *Mammalia*. Part V. British Pleistocene *Ovidæ*, *Ovibos moschatus*.
Palæontographical Society, xxv, pp. 1-30, pl. i-v.

1879 A
On the range of the mammoth in space and time.
Quart. Jour. Geol. Soc., xxxv, pp. 138-147.

1880 A
The classification of the Tertiary period by means of the *Mammalia*.
Quart. Jour. Geol. Soc., xxxi, pp. 379-405.

1883 A
On the alleged existence of *Ovibos moschatus* in the Forest-bed, and on its range in space and time.
Quart. Journ. Geol. Soc., xxxix, pp. 575-581, with 1 woodcut.

Dawkins, W. Boyd—Continued. 1889 A
[Address as president of Section C
of the Brit. Assoc. Adv. Sci., 1888, on
the progress of geological inquiry.]
Report. Brit. Assoc. Adv. Sci., 58th meeting,
Bath, 1888, pp. 644-650.

Dawkins, W. B., and Sanford, W. A.
1872 A
The British Pleistocene *Mammalia*.
Part iv. British Pleistocene *Felidae*.
Palæontographical Society, xxv, pp. 177-
194; pls. xxiv-xxv.

Dawson, George M. 1894 A
Notes on the occurrence of mammoth
remains in the Yukon district of Can-
ada and Alaska.
Quart. Jour. Geol. Soc., 1, pp. 1-9.
For notice of this paper and for remarks by
Haworth see Nature, xlix, p. 93.

Dawson, J. William. 1855 A
Notice of the discovery of a reptilian
skull in the Coal-measures of Pictou.
Quart. Jour. Geol. Soc., xi, pp. 8-9.
The reptile referred to is *Baphetes planiceps*.

— 1860 A
On a terrestrial mollusk, a chilognathous
myriapod, and some new species
of reptiles from the Coal-measures of
Nova Scotia.
Quart. Jour. Geol. Soc., xvi, pp. 268-277,
with 29 figs. in the text.

— 1862 A
Note on the discovery of additional
remains of land animals in the Coal-
measures of the South Joggins, Nova
Scotia.
Quart. Jour. Geol. Soc., xviii, pp. 5-7.

— 1863 A
Air breathers of the Coal period.
Amer. Jour. Sci. (2), xxxvi, pp. 430-432.
Abstract of pamphlet with same title, with
illustrations; Bailliere, New York and Lon-
don, 1863; Montreal, Dawson Brothers.
See also Canadian Naturalist, viii, 1863.

— 1863 B
Notice of a new species of *Dendropep-*
ton, and of the dermal coverings of cer-
tain Carboniferous reptiles.
Quart. Jour. Geol. Soc., xix, pp. 469-473.

— 1863 C
A review of Dr. Dawson's book, "Air
breathers of the Coal period," by S. J.
Mackie.
The Geologist, vi, pp. 434-440.

Dawson, J. William—Continued. 1863 D
The air breathers of the Coal period
of Nova Scotia.
Canadian Naturalist and Geologist, viii, pp.
1-12; 81-92; 159-160; 161-175; 268-295; with pls.
i-vi.

— 1863 E
Note on the footprints of a reptile
from the Coal formation of Cape
Breton.
Canadian Naturalist and Geologist, viii, pp.
430-431, with one fig. in the text.
Name assigned to the tracks, *Sauropus*
sydnensis.

— 1868 A
Acadian geology. The geological
structure, organic remains, and min-
eral resources of Nova Scotia, New
Brunswick, and Prince Edward
Island.
London, 1868; pp. i-xxvii; 1-694, with 232
figs. in the text.

— 1870 A
Note on some new animal remains
from the Carboniferous and Devonian
of Canada.
Quart. Jour. Geol. Soc., xxvi, pp. 166-167.
Also in Canadian Naturalist (2), v, pp. 98-99.
Note on, in Geol. Magazine, vii (1870), p. 87.
Describes briefly *Baphetes minor*.

— 1872 A
Note on footprints from the Carbonif-
erous of Nova Scotia, in the collection
of the Geological Survey of Canada.
Geol. Magazine (1), ix, pp. 251-253, with 1
woodcut.
Describes *Sauropus unguifer*.

— 1876 A
On a recent discovery of Carbonifer-
ous batrachians in Nova Scotia.
Amer. Jour. Sci. (3), xii, pp. 440-447.

— 1877 A
Lower Carboniferous fishes of New
Brunswick.
Canadian Naturalist (2), viii, pp. 337-340,
with figs. in the text.
Describes the new species *Palæoniscus*
(*Rhadinichthys*) *modulus*, and *P. jacksonii*.

— 1877 B
Note on a fossil seal from the Leda
clay of the Ottawa Valley.
Canadian Naturalist (2), viii, pp. 340-341.
The seal is identified as *Phoca groenlandica*.

— 1878 A
Acadian Geology. The geological
structure, organic remains, and miner-

Dawson, J. William—Continued. 1878 A
al resources of Nova Scotia, New Brunswick, and Prince Edward Island.

Third edition, pp. i-xxvii; 1-694; supplement, pp. 1-103, with 248 figs.

1882 A

On the results of recent explorations of erect trees containing animal remains in the Coal formation of Nova Scotia.

Philos. Trans. Royal Soc., Lond., clxxiii, pt. ii, pp. 621-659; pls. xxxix-xlvii.

1882 B

On the results of recent explorations of erect trees containing reptilian remains in the Coal formation of Nova Scotia.

Canadian Naturalist (2), x, pp. 252-254.

This is a brief abstract of the preceding paper and is reprinted from Nature.

1883 A

On portions of the skeleton of a whale from gravel on the line of the Canadian Pacific railway, near Smiths Falls, Ontario.

Amer. Jour. Sci. (3), xxv, pp. 200-202.

Canadian Naturalist (2), x, pp. 385-387.

1890 A

Note on a fossil fish and marine worm found in the Pleistocene nodules of Greens Creek, on the Ottawa.

The Canadian Record of Science, iv, pp. 86-88.

Records the finding of *Cottus uncinatus* (*Arctediellus*); also *Mallotus villosus*, *Cyclopterus lumpus*, and *Gasterosteus aculeatus*.

1891 A

Note on *Hylonomus lyelli*, with photographic reproduction of skeleton.

Geol. Magazine (3), viii, pp. 258-259, with pl. viii.

1891 B

On new specimens of *Dendroperpeton acadianum*, with remarks on other Carboniferous amphibians.

Geol. Magazine (3), viii, pp. 145-156, with 4 figs.

1892 A

On the mode of occurrence of remains of land animals in erect trees at the South Joggins, Nova Scotia.

Trans. Royal Soc., Canada, for 1891, ix, sec. iv, pp. 127-128.

1894 A

Some salient points in the science of the earth.

Pp. 499; illus. 46; New York: Harper & Brothers, publishers, 1894.

Chapter x; The oldest air-breathers.

Dawson, J. William—Continued. 1894 B

Preliminary note on recent discoveries of batrachian and other air-breathers in the Coal formation of Nova Scotia.

The Canadian Record of Science, vi, pp. 1-7, with 1 fig. in the text.

1895 A

Synopsis of the air-breathing animals of the Palæozoic in Canada up to 1894.

Trans. Roy. Soc. of Canada for 1894, xii, sec. iv, pp. 71-78.

1895 B

Note on a specimen of *Beluga catodon*, from the Leda clay, Montreal.

The Canadian Record of Science, vi, pp. 351-354.

— See also **Lyell** and **Dawson**.

Day, E. C. H.

1864 A

On *Acrodus anningia*; with remarks upon the affinities of the genera *Acrodus* and *Hybodius*.

Geol. Magazine (1), i, pp. 57-65, with pls. iii and iv.

“**D. L. H.**”

1838 A

Fossil Fishes.

Amer. Jour. Sci., xxxiv, pp. 198-200.

Dean, Bashford.

1891 A

Pineal foramen of placoderm and catfish.

Nineteenth report Commissioners of Fisheries of the State of New York, pp. 307-363, with pls. i-xiv.

The plates and the explanations thereof are included in the pagination.

1893 A

Report of proceedings of New York Acad. of Sciences, Dec. 12, 1892.

Amer. Naturalist, xxvii, p. 183.

Refers to finding of *Protoceras celer*.

1893 B

On *Trachosteus* and *Mylostoma*; notes on their structural characters.

Trans. N. Y. Acad. Sci., xii, pp. 70-71.

1893 C

Note on the mode of origin of the paired fins.

Trans. N. Y. Acad. Sci., xii, pp. 121-125.

1893 D

On the fin-structures of *Diplurus*.

Trans. N. Y. Acad. Sci., xiii, p. 22.

A very brief abstract.

1894 A

Contributions to the morphology of *Cladoselache* (*Cladodus*).

Jour. Morphology, ix, pp. 87-114, pl. vii.

- Dean, Bashford**—Continued. 1894 B
A new Cladodont from the Ohio Waverly, *Cladoselache newberryi*, n. sp.
Trans. N. Y. Acad. Sci., xiii, pp. 115-119, with pl. i.
Describes *C. newberryi*.
- 1895 A
Fishes, living and fossils; an outline of their forms and probable relationships.
Pp. i-xiv; 1-300, with frontispiece and 344 figs. in the text; Macmillan & Co., New York and London.
Review of by A. S. Woodward, Geol. Magazine, 1896, p. 135; and in Nat. Sci., viii, 267.
- 1896 A
On the vertebral column, fins, and ventral armoring of *Dinichthys*.
Trans. N. Y. Acad. Sci., vol. xv, pp. 157-163, pls. vii, viii.
- 1896 B
The fin-fold origin of the paired limbs, in the light of the ptychopterygia of Palaeozoic sharks.
Anatom. Anzeiger, xi, pp. 673-679, with 8 figs.
- 1896 C
Sharks as ancestral fishes.
Nat. Science, viii, pp. 245-253, with 5 figs. in the text.
Describes and figures *Cladoselache*.
- 1897 A
Note on the ventral armoring of *Dinichthys*.
Trans. N. Y. Acad. Sci., xvi, pp. 57-61, with pls. ii, iii.
- 1897 B
On a new species of *Edestus*, *E. lecontei*, from Nevada.
Trans. N. Y. Acad. Sci., xvi, pp. 61-69, with pls. iv, v.
Discusses also its relationships to the other species.
- 1899 A
Devonian fishes for the American Museum.
Science (2), x, p. 978.
Refers to a purchase of a collection of Placoderms from the Devonian of Ohio.
- Deane, James**. 1844 A
On the fossil footmarks of Turners Falls, Mass.
Amer. Jour. Sci., xlvi, pp. 73-77, with 2 pls.
Abstract of, in Quart. Jour. Geol. Soc. Lond., i, p. 141.
- 1844 B
On the discovery of fossil footmarks.
Amer. Jour. Sci., xlvi, pp. 381-390.
A protest against Prof. E. Hitchcock's claims regarding the fossil footmarks of the Connecticut Valley. See Hitchcock, E., 1844 B.
- Deane, James**—Continued. 1844 C
Answer to the "Rejoinder" of Professor Hitchcock.
Amer. Jour. Sci., xlvii, pp. 399-401.
Reply to Hitchcock, E., 1844 B.
- 1845 A
Description of fossil footprints in the New Red sandstone of the Connecticut Valley.
Amer. Jour. Sci., xlviii, pp. 158-167, with 1 pl.
- 1845 B
Illustrations of fossil footmarks.
Boston Jour. Nat. Hist., v, pp. 277-284, with 3 figs. in the text.
No species named.
- 1845 C
Notice of a new species of batrachian footmarks.
Amer. Jour. Sci., xlix, pp. 79-81, with figs. in the text.
No systematic name given the tracks.
- 1845 D
Fossil footmarks and raindrops.
Amer. Jour. Sci., xlix, pp. 213-214, with 1 page of figs.
No systematic names are applied to the footmarks.
- 1847 A
Notice of new fossil footprints.
Amer. Jour. Sci. (2), iii, pp. 74-79, with 4 figs. in the text.
- 1847 B
Fossil footprints.
Amer. Jour. Sci. (2), iv, pp. 448-449.
- 1848 A
Fossil footprints of a new species of quadruped.
Amer. Jour. Sci. (2), v, pp. 40-41, with 1 fig. in the text.
In this paper no systematic name is given to the footprints.
- 1850 A
Fossil footprints of Connecticut River.
Jour. Acad. Nat. Sci. Phila. (2), ii, pp. 71-74, pls. viii, ix.
- 1856 A
On the sandstone fossils of Connecticut River.
Jour. Acad. Nat. Sci. Phila. (2), iii, pp. 173-178.
- 1861 A
Ichnographs from the sandstone of Connecticut River. A memoir upon the fossil footprints and other impressions of the Connecticut River sandstone.
4to. Boston, 1861, pp. 1-61, with pls. i-xlvi.
This work was compiled mostly from Dr. Deane's incomplete papers by T. T. Bouvé. Accompanying it is an introduction (pp. 2-4), a biographical notice (pp. 5-12), and a list of

Deane, James—Continued.

Dr. Deane's published papers (pp. 13-14). The book consists mostly of explanations of the plates, and the species have been determined by Mr. Bouvé from Hitchcock's works.

Deecke, W. 1895 A

Notiz über ein Nothosauriden-Fragment.

Zeitschr. deutsch. geol. Gesellsch., xlvii, pp. 303-306, with 1 fig. in the text.

Deichmüller, J. V.

See **Geinitz** and **Deichmüller**.

De Kay, James E. 1824 A

Account of the discovery of a skeleton of the *Mastodon giganteum*.

Annals Lyc. Nat. Hist. N. Y., i, pp. 143-147.

A report made by Messrs. De Kay, Van Rensselaer, and Cooper. Records finding of skeleton in Monmouth County, N. J.

1828 A

Notes on a fossil skull in the cabinet of the Lyceum, of the genus *Bos*, from the banks of the Mississippi, with observations on the American species of the genus.

Annals Lyc. Nat. Hist. N. Y., ii, pp. 280-291.

See also Edinburgh New Philos. Jour., 1828, v, pp. 326-327.

1830 A

On the remains of extinct reptiles of the genera *Mosasaurus* and *Geosaurus* found in the Secondary formation of New Jersey, and on the occurrence of the substance recently named coprolite by Dr. Buckland, in the same locality.

Annals Lyc. Nat. Hist. N. Y., iii, pp. 134-141, pl. iii.

1833 A

Observations on a fossil jaw of a species of gavial from west Jersey.

Annals Lyc. Nat. Hist. N. Y., iii, pp. 156-165, pl. iii, figs. 7-11.

1842 A

Zoology of New York, or the New York fauna. Part III. Reptiles and Amphibia.

Pp. i-vii; 1-98, with pls. i-xxiii.

1842 B

Fossil fishes.

Zoology of New York. Part IV, Fishes, pp. 385-387.

Gives a list of fossil fishes found in the United States and known to De Kay. Localities and references to literature given.

1842 C

Mammalia.

Zoology of New York. Part I. *Mammalia*, pp. i-xv; 1-142, with pls. i-xxxiii.

Describes and refers to a number of fossil mammals. Of these a few are figured.

Delbos, Joseph.

1858 A

Recherches sur les ossements des Carnassiers des cavernes de Senthem (Haut-Rhin) précédées d'observations sur l'ostéologie de l'ours brun des Pyrénées.

Annals des Sciences Naturelles, Zool. (4), ix, pp. 155-223.

1860 A

Recherches sur les ossements des Carnassiers des cavernes de Senthem (Haut-Rhin): Études sur les ours fossiles.

Annales des Sciences Naturelles, Zool. (4), xiii, pp. 47-108.

1860 B

Recherches sur les ossements des Carnassiers des cavernes de Senthem (Haut-Rhin): Études sur les ours fossiles.

Annales des Sciences Naturelles, Zool., (4), xiv, pp. 5-112.

Delfortrie, E.

1874 A

Un *Zeuglodon* dans les faluns du sud-ouest de la France.

Jour. de Zoologie, iii, pp. 25-30, with 2 figs. in the text.

Dennis, J. B. P.

1861 A

On the mode of flight of the pterodactyles of the Coproldi bed near Cambridge.

Report Brit. Assoc. Adv. Sci., 30th meeting, Oxford, 1860, p. 76.

Depéret, Charles.

1887 A

Recherches sur la succession des faunes de vertébrés miocènes de la vallée du Rhone. Pt. I (pp. 45-118), Stratigraphie paléontologique. Pt. ii (pp. 119-307), Description des vertébrés miocènes du bassin du Rhone.

Archives Mus. d'Hist. Nat. de Lyon, iv, pp. 45-313, with pls. ix-xxv.

1892 A

La faune de mammifères miocènes de la Grive-Saint-Alban (Isère).

Archives Mus. d'Hist. Nat. de Lyon, pp. 1-95, pls. i-iv.

Deslongchamps-Eudes, J. A. 1838 A

Mémoire sur le *Poekilopleuron bucklandi*, grand saurien fossile, intermédiaire entre les crocodiles et les lézards.

Mém. Soc. Linn. Normandie, vi, pp. 37-146, with pls. i-viii.

1864 A

Mémoires sur les téléosauriens de l'époque jurassique du Department du

- Deslongchamps-Eudes, J. A.**—Cont'd.
Calvados. Première mémoire contenant l'exposé des caractères généraux des téléosauriens comparés à ceux des crocodiliens et la description particulière des espèces du lias supérieur.
Mém. Soc. Linn. Normandie, Caen, xiii, No. 3, pp. 1-138, with 9 pls.
- Deslongchamps-Eudes, E.** 1870 A
Note sur les reptiles fossiles appartenant à la famille des téléosauriens, dont le débris ont été recueillis dans les assises jurassiques de Normandie.
Bull. Soc. Géol. de France, xxvii, pp. 299-351, pls. ii-viii.
- Desor, E.** 1849 A
Remarks on finding of mastodon at Galena, Mo.
Proc. Boston Soc. Nat. Hist., iii, p. 207.
- 1852 A
Post-pliocene of the Southern States and its relation to the Laurentian of the North and the deposits of the valley of the Mississippi.
Amer. Jour. Sci. (2), xiv, pp. 49-59.
- Destineze, P.** 1898 A
Sur deux *Diplodus* et un *Chomatodus* de l'Ampélite à unifère de Chokier, et deux *Cladodus* de Visé.
Ann. Soc. Géol. Belgique, xxiv, pp. 219-223.
- Dickeson, M. W.** 1845 A
On the geology of the Natchez bluffs.
Proc. 6th meeting Assoc. Amer. Geologists and Naturalists, 1845, pp. 77-79.
In this is described "a curious nondescript quadruped."
- 1846 A
Remarks on *Megalonyx jeffersoni*.
Proc. Acad. Nat. Sci. Phila., iii, p. 106.
- Didelot, Léon.** 1875 A
Note sur un *Pycnodus* nouveau du Néocomien moyen (*P. heterodon*).
Bull. Soc. Géol. France (3), iii, pp. 237-256, pl. vi.
- Diffenberger, F. R.** 1873 A
Elephas americanus in Mexico.
Amer. Jour. Sci. (3), vi, p. 62.
- Dixon, Frederick.** 1850 A
The geology and fossils of the Tertiary and Cretaceous formations of Sussex.
Pp. i-xvi; 1-422, with pls. i-xi.
- 1878 A
The geology of Sussex, or the geology and fossils of the Tertiary and Cretaceous formations of Sussex; new edi-
- Dixon, Frederick**—Continued.
tion, revised and augmented, by T. Rupert Jones, Brighton, 1878.
Pp. i-xxiv; 1-469, with pls. i-xxvii.
- Dobson, G. E.** 1885 A
An attempt to exhibit diagrammatically the several stages of evolution of the *Mammalia*.
Report Brit. Assoc. Adv. Sci., 54th meeting, Montreal, 1884, pp. 763-769, with 1 pl.
- 1878 A
Catalogue of the *Chiroptera* in the collection of the British Museum.
London, 1878. 8 vo; pp. i-xlii; 1-567, with pls. i-xxix.
- 1883 A
A monograph of the *Insectivora*, systematic and anatomical. Part I, including the families *Erinaceidæ*, *Centetidæ*, and *Solenodontidæ*. Part II, *Potamogalidæ*, *Chrysochloridæ*, and *Talpidae* [in part]. Part iii, including pls. xxiii-xxviii.
Pp. 1-172, with pls. i-xxviii. 4to. London. Part i was issued in 1882; pt. ii, in 1883; pt. iii, in 1890. The text was not completed.
- Döderlein, Ludwig.** 1878 A
Ueber das Skelet des *Tapirus pinchacus*.
Archiv Naturgesch. xlv, i, pp. 37-90.
- 1889 A
Das Skelet von *Pleuracanthus*.
Zoolog. Anzeiger, xii, pp. 123-127, with 1 text fig.
See also **Steinmann** and **Döderlein**.
- Dohrn, Anton.** 1886 A
Entstehung und Differenzirung des Zungenbein-und Kiefer-Apparates der Selachier.
Mittheil. Zoolog. Station Neapel, vi, pp. 1-48; 80-92, with pls. i-viii.
- Dollo, Louis.** 1882 A
Note sur l'ostéologie des *Mosasauridæ*.
Bull. de Musée Roy. d'Hist. nat. de Belgique, i, pp. 55-74, with pls. iv-vi.
- 1882 B
Première note sur les Dinosauriens de Bernissart.
Bull. de Musée Roy. d'Hist. nat. de Belgique, i, pp. 161-178, with pl. ix.
- 1882 C
Deuxième note sur les Dinosauriens de Bernissart.
Bull. de Musée Roy. d'Hist. nat. de Belgique, i, pp. 205-211, with pl. xii.
The paper treats especially of the sternum of *Iguanodon* and related genera.

Dollo, Louis—Continued. 1883 A

Note sur la présence chez les oiseaux du "troisième trochanter" des Dinosauriens et sur la fonction de celui-ci.

Bull. de Musée Roy. d'Hist. nat. de Belgique, ii, pp. 13-19, with pl. i.

1883 B

Troisième note sur les dinosauriens de Bernissart.

Bull. de Musée Roy. d'Hist. nat. de Belgique, ii, pp. 85-126, with pls. iii-v.

Treats of *Iguanodon* and its relationships to other *Dinosauria* and to *Aves*. Plate v is a restoration of *Iguanodon bernissartensis*.

1883 C

Note sur les restes de dinosauriens rencontrés dans le Crétacé supérieur de la Belgique.

Bull. de Musée Roy. d'Hist. nat. de Belgique, ii, pp. 205-221, with 20 figs. in the text.

1883 D

Quatrième note sur les dinosauriens de Bernissart.

Bull. de Musée Roy. d'Hist. nat. de Belgique, ii, pp. 223-252, with pls. ix, x.

This paper is devoted to the anatomy of *Iguanodon bernissartensis*.

1883 E

Première note sur les crocodiliens de Bernissart.

Bull. de Musée Roy. d'Hist. nat. de Belgique, ii, pp. 306-340, with pl. xii.

Treats of relationships of the genera of crocodiles.

1883 F

Note sur la présence du *Gastornis edwardsii*, Lemoine, dans l'assise inférieure de l'étage landenien, à Mesvin, Près Mons.

Bull. de Musée Roy. d'Hist. nat. de Belgique, ii, pp. 297-305, with pl. ix and 1 text fig.

1884 A

Première note sur les chéloniens de Bernissart.

Bull. de Musée Roy. d'Hist. nat. de Belgique, iii, pp. 63-84, with pls. i, ii.

Contains a discussion of the classification of the *Testudinata*.

1884 B

Cinquième note sur les dinosauriens de Bernissart.

Bull. de Musée Roy. d'Hist. nat. de Belgique, iii, pp. 129-151, with pls. vi, vii.

Treats especially of the structure and relationship of *Iguanodon*.

Dollo, Louis—Continued. 1884 C

Première note sur le Simnedosaurien d'Erquelines.

Bull. de Musée Roy. d'Hist. nat. de Belgique, iii, pp. 151-186, with pls. viii, ix.

Discusses the structure of *Simnedosaurus* and its relation to *Champsosaurus* and *Sphenodon*.

1885 A

Sur l'identité des genres *Champsosaurus* et *Simnedosaurus*.

Bull. Soc. géol. de France (3), xiv, pp. 95-96.

1885 B

Notes d'ostéologie erpétologique.

I. Sur une nouvelle dent de *Craspedon*, dinosaurien du Crétacé supérieur de la Belgique [pp. 309-318, 6 figs. in text].

II. Sur la présence d'un canal basioccipital médian et de deux canaux hypobasilaires chez un genre mosasauriens [pp. 319-331, 8 figs.]. III. Sur la présence d'une interclavicule chez un genre de mosasauriens et sur la division de ce sous-ordre en familles [pp. 332-335, 2 figs.]. IV. Sur les épiphyses du calcaneum des lacertiliens [pp. 336-338, 4 figs.].

Annales Soc. Sci. de Bruxelles, ix, pp. 309-338, with 20 figs. in text.

1886 A

Première note sur les chéloniens du Bruxellien (Éocène moyen) de la Belgique.

Bull. Musée Roy. d'Hist. nat. Belgique, iv, pp. 75-100, with pls. i, ii.

Contains a synopsis of the classification of *Testudinata* and observations on their osteology.

1885 C

Première note sur le Hainosaure, mosasaurien nouveau de la craie brune phosphatée de Mesvin-Ciply, Près Mons.

Bull. de Musée Roy. d'Hist. nat. de Belgique, iv, pp. 25-35.

Contains notes on various American genera of *Mosasauridae*.

1887 A

Psephophorus.

Annales Soc. Scientifique de Bruxelles, xi, pp. 139-176.

1888 A

On the humerus of *Euclastes*.

Geol. Magazine (3), v, pp. 261-267, with 3 figs.

- Dollo, Louis**—Continued. 1888 B
Iguanodontidae et Comptonotidae.
 Comptes rend. Acad. Paris, cvi, pp. 775-777.
 Notice of this paper in Geol. Mag., 1888, v, p. 520.
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- 1888 C
 Première note sur les chéloniens oligocènes et néogènes de la Belgique.
 Bull. de Musée Roy. d'Hist. nat. de Belgique, v, pp. 59-98, with pl. iv and a text fig. of a young *Dermochelys coriacea*.
 This important paper contains a discussion of the higher groups of *Testudinata*, and especially a consideration of the value of the group *Atheca*.
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- 1888 D
 Sur le crâne des mosasauriens.
 Bull. Sci. de la France et de la Belgique (3), i (xix), pp. 1-11, with pl. i and 9 figs. in the text.
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- 1888 E
 Sur la signification du "trochanter pendant" des dinosauriens.
 Bull. Sci. de la France et de la Belgique (3), i (xix), pp. 215-224.
-
- 1890 A
 Première note sur les mosasauriens de Maestricht.
 Mém. Soc. Belge de Géologie, de Paléont., et d'Hydrologie (Bruxelles), iv, pp. 151-169, with pl. viii.
 Contains abundant citations of the literature of the *Mosasauridae*.
-
- 1891 A
 Nouvelle note sur le Champsosauire, rhynchocephalien adapté à la vie fluviatile.
 Mém. Soc. Belge de Géologie, de Paléont., et d'Hydrologie (Bruxelles), v, pp. 147-199, with pls. vi-viii.
-
- 1892 A
 Sur l'origine de la nageoire caudale des *Ichthyosaurus*.
 Bull. Soc. Belge Géol., Paléont., Hydrol., vi, Pr. verb., pp. 167-174, with 8 text figs.
-
- 1892 B
 Première note sur les Téléostéens du Crétacé supérieur de la Belgique.
 Bull. Soc. Belge Géol., Paléont., Hydrol., vi, pp. 180-189, with 4 text figs.
-
- 1892 C
 Sur un nouveau type de dinosauriens.
 Bull. Soc. Belge Géol., Paléont., Hydrol., vi, Pr. verb., pp. 10-12.
 The principal groups of dinosaurs are characterized. The new type alluded to appears to be *Triceratops* Marsh.
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- Dollo, Louis**—Continued. 1893 A
 Suppression du genre *Leiodon*.
 Bull. Soc. Belge Géol., Paléont., Hydrol., vii, Pr. verb., p. 79.
 Regards *Leiodon* as a synonym of *Mosasaurus*.
-
- 1893 B
Champsosaurus et *Parciasaurus*.
 Bull. Soc. Belge Géol., Paléont., Hydrol., vii, p. 79.
-
- 1893 C
 Nouvelle note sur l'ostéologie des mosasauriens.
 Bull. Soc. Belge Géol., Paléont., Hydrol., vi, pp. 219-259, with pls. iii, iv.
-
- 1896 A
 Sur la phylogénie des *Dipneustes*.
 Bull. Soc. Belge Géol., Paléont., Hydrol., ix, pp. 79-128, with pls. v-ix.
 Concluded with a list of 123 papers and memoirs bearing on the subject. An abstract appears in Amer. Naturalist, xxx, p. 479.
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- Domeier, Wilhelm**. 1803 A
 Nachricht von einem in Nord America gefundenen vollständigen Gerippe eines Vierfüsslers, bisher häufig Mammoth oder Mammuth genannt.
 Neue Schriften Gesellsch. naturforsch. Freunde zu Berlin, iv, pp. 79-110.
-
- Douglass, Earl**. 1900 A
 The Neocene lake beds of western Montana and descriptions of some new vertebrates from the Loup Fork. A thesis for the degree of M. S. in the University of Montana, June, 1899. Published by the University.
 Pp. 3-27, with pls. i-iv.
 Copies of this paper were first distributed about July 1, 1900.
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- 1900 B
 New species of *Merycochærus* in Montana, Part i.
 Amer. Jour. Sci. (4), x, pp. 428-438, with 3 figs. in the text.
 Describes *M. laticeps*. Part ii appeared in same journal January, 1901.
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- Donald, J. T.** 1881 A
 Notes on elephant remains from Washington Territory.
 The Canadian Naturalist (2), ix, pp. 53-56.
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- Dugès, Alfredo**. 1887 A
Platygonus alemanii, nobis, fósil cuaternario.
 La Naturaleza (2), i, pp. 16-18, pls. i, ii.
-
- Duméril, Aug.** 1865 A
 Histoire naturelle des poissons ou ichthyologie générale. Tome premier,

Duméril, Aug.—Continued.

Élasmobranches, Plagiostomes et Holocéphales ou Chimères.

Pl. 1-720, with atlas of pls., Paris, 1865.

Dupont, Edward. 1867 A

Human remains in Belgium.

Amer. Jour. Sci. (2), xliii, pp. 121-123; 260-264.

Contains mention of *Elephas primigenius*.

Duralde, Martin. 1804 A

Abstract of a communication from Mr. Martin Duralde relative to fossil bones, etc., of the country of Apelousas, west of the Mississippi, to Mr. William Dunbar, of the Natchez, and by him transmitted to the society.

Trans. Amer. Philos. Soc., vi, pp. 55-58.

No species definitely mentioned except bone of man, and of "elephants."

Duvernoy, G. L. 1851 A

Caractères ostéologiques des genres nouveaux ou des espèces nouvelles de cétacés vivants ou fossiles.

Annales Sci. Nat. (3), xv, pp. 5-71; 381, with pls. i, ii.

— 1855 A

Nouvelles études sur les rhinocéros fossiles.

Arch. Mus. d'Hist. nat., Paris, viii, pp. 1-144, with pls. i-viii.

Earle, Charles. 1891 A

On a new species of *Palæosyops*—*Palæosyops megarhinus*.

Amer. Naturalist, xxv, pp. 45-47, with 1 fig. in text.

— 1891 B

Palæosyops and allied genera.

Proc. Acad. Nat. Sci. Phila., 1891, pp. 106-117, with 8 figs. in the text.

— 1892 A

Revision of the species of *Coryphodon*.

Bull. Amer. Mus. Nat. Hist., iv, pp. 149-166.

— 1892 B

The variability of specific characters as exhibited by the extinct genus *Coryphodon*.

Science, xx, pp. 7-9, with 2 figs. in the text.

— 1892 C

A memoir upon the genus *Palæosyops* Leidy, and its allies.

Jour. Acad. Nat. Sci. Phila., ix, pp. 267-388, pls. x-xiv.

Reviewed by R. Lydekker, Natural Science, ii, pp. 148-149.

Earle, Charles—Continued. 1893 A

Some points in the comparative anatomy of the tapir.

Science, xxi, p. 118.

Discusses also the names of the tapir.

— 1893 B

On the systematic position of the genus *Protogonodon*.

Amer. Naturalist, xxvii, pp. 377-379.

— 1893 C

The evolution of the American tapir.

The Geol. Magazine (3), x, pp. 391-396.

— 1893 D

The structure and affinities of the Puerco ungulates.

Science, xxii, pp. 49-51.

— 1895 A

On a supposed case of parallelism in the genus *Palæosyops*.

Amer. Naturalist, xxix, pp. 622-626, pl. xxvii.

— 1896 A

Notes on the fossil *Mammalia* of Europe. I. Comparison of the American and European forms of *Hyracotherium*.

Amer. Naturalist, xxx, pp. 131-135.

— 1896 B

Tapirs, past and present.

Science (2), iv, pp. 934-935.

— 1898 A

Relationship of the *Chriacidae* to the *Primates*.

Amer. Naturalist, xxxii, pp. 261-262.

See also **Osborn and Earle; Wortman and Earle**.

Eastman, Charles R. 1895 A

Beiträge zur Kenntniss der Gattung *Oxyrhina*, mit besonderer Berücksichtigung von *Oxyrhina mantelli* Agassiz.

Palæontographica, xli, pp. 149-191, with pls. xvi-xviii.

— 1896 A

Observations on the dorsal shields in the *Dinichthyids*.

Amer. Geologist, xviii, pp. 222-223.

Abstract of paper read before the Amer. Assoc. Adv. Sci., 1896.

— 1896 B

Preliminary note on the relations of certain body plates in the *Dinichthyids*.

Amer. Jour. Sci. (4), ii, pp. 46-50.

— 1896 C

Review of Bashford Dean's "On the vertebral column, fins, and central armoring of *Dinichthys*."

Amer. Geologist, xviii, pp. 316-317.

Eastman, Charles R.—Continued. 1896 D
Remarks on *Petalodus alleghaniensis*,
Leidy.

Jour. Geology, iv, pp. 174-176.

1897 A

Tumibobatis vetustus; a new form of
fossil skate.

Amer. Jour. Sci. (4), iii, pp. 85-90, with pl. i
and 1 fig. in the text.

1897 B

On *Ctenacanthus* spines from the Keo-
kuk limestone of Iowa.

Amer. Jour. Sci. (4), iii, pp. 10-13, with 2 figs.
in the text.

Describes *C. ziphius* St. J. and W., and *C.*
acutus sp. nov.

1897 C

On the characters of *Macropetalichthys*.

Amer. Naturalist, xxxi, pp. 493-499, with pl.
xii, and 1 fig. in the text.

1897 D

On the relations of certain plates in
the *Dinichthyids*.

Bull. Mus. Comp. Zool., Harvard, xxxi, pp.
19-43, with pls. i-v.

1898 A

On the occurrence of fossil fishes in
the Devonian of Iowa.

Iowa Geol. Surv., vii, pp. 108-116, with pl.
iv and 1 fig. in the text.

The new genus *Synthetodus* is established
and the new species *Ptyctodus molaris* described.

A notice of this paper, by C. R. Keyes, is
found in Amer. Geologist, xxii, pp. 237-239.

1898 B

Dentition of Devonian *Ptyctodontidae*.

Amer. Naturalist, xxxii, pp. 473-488; 545-
560, with 50 text figs.

1898 C

Some new points in *Dinichthyid* osteo-
logy.

Proc. Amer. Assoc. Adv. Sci., xlvii, Boston,
pp. 371-372.

See also Science (2), viii, pp. 400-401.

1898 D

Some new points in *Dinichthyid*
osteology.

Amer. Naturalist, xxxii, pp. 747-768, with 6
text figs.

For abstract, see Proc. Amer. Assoc. Adv.
Sci., xlvii, Boston, pp. 371-372.

1899 A

Some new American fossil fishes.

Science (2), ix, pp. 642-643.

1899 B

[Notes on fossil fishes found in the
Devonian at Milwaukee, Wis.]

Jour. of Geology, vii, pp. 278, 283.

These notes are contained in a paper by
Teller and Monroe.

Eastman, Charles R.—Continued. 1899 C
Description of new species of *Diplodus*
teeth from the Devonian of northeast-
ern Illinois.

Jour. Geol., vii, pp. 489-493, with pl. vii.

Describes as new *Diplodus priscus* and *D. stri-
atus*; also figures *Phacodus politus* Newb.

1899 D

Report on the department of verte-
brate palæontology.

Annual Report of the assistant in charge of
the Mus. Comp. Zool. Harvard College to the
president and fellows of Harvard College for
1898-99, pp. 15, 16.

Records the fact that the type of *Titanichthys*
agassizi is in Harvard College, and that there
is also there a nearly complete skeleton of
Dinichthys pustulosus.

1899 E

Jurassic fishes from Black Hills of
South Dakota.

Bull. Geol. Soc. America, x, pp. 397-408, with
pls. xlv-xlviii and 2 text figs.

1899 F

Upper Devonian fish fauna of Dela-
ware County, N. Y.

17th Annual Report of the State Geologist
[of New York] for the year 1897, pp. 317-327,
with 6 text figs.

1900 A

Fossil *Lepidosteids* from the Green
River shales of Wyoming.

Bull. Mus. Comp. Zool. Harvard Coll., xxxvi,
pp. 67-75, with pls. i-ii.

1900 B

Dentition of some Devonian fishes.

Jour. Geology, viii, pp. 32-41, with 7 figs. in
the text.

1900 C

Devonische Fischreste aus der Eifel.

Amer. Geologist, xxv, pp. 391-392.

A notice of Huene's paper in Neues Jahrbuch
Min. 1900, i, Abh., p. 64.

1900 D

Einige neue Notizen über devonische
Fischreste aus der Eifel.

Centralbl. Min., Geolog. und Palæont., 1900,
No. 6, pp. 177-178.

1900 E

New fossil bird and fish from the
Middle Eocene of Wyoming.

Geol. Magazine (4), vii, pp. 54-58, with pl.
iv.

Describes new genus and species of bird,
Gallinuloides wyomingensis, and fish, *Lepidosteus*
atrox Cope.

- Edwards, Alphonse Milne.** 1863 A
Mémoire sur la distribution géologique des oiseaux fossiles et description de quelques espèces nouvelles.
Annales des Sciences Naturelles, Zool. (4), xx, pp. 133-176, pl. iv.
- 1864 A
Recherches anatomiques, zoologiques, et paléontologiques sur la famille des chevrotains.
Annales des Sciences Naturelles, Zool. (5), ii, pp. 49-167, pls. ii-xii.
- 1865 A
Rapport sur les notes de MM. Nicolas et Chrétien relatives à des ossements fossiles provenant de la Vallée de Zacualco.
Arch. Commission Sci. du Mexique, i, pp. 401-407, with 1 pl.
- 1868 A
Recherches anatomiques et paléontologiques pour servir à l'histoire des oiseaux fossiles de la France.
Vol. i, pp. 1-475, with pls. i-xcvi.
- 1871 A
Recherches anatomiques et paléontologiques pour servir à l'histoire des oiseaux fossiles de la France.
Vol. ii, pp. 1-632, with pls. xcvi-cc.
- Edwards, Arthur M.** 1895 A
Ornithichnites and jaw bone from the Newark sandstone of New Jersey.
Amer. Jour. Sci. (3), 1, p. 346.
- Edwards, Timothy.** 1793 A
A description of a horn or bone lately found in the river Chemung, or Tyoga, a western branch of the Susquehanna, about twelve miles from Tyoga Point.
Mem. Amer. Acad., ii, p. 164.
Describes what was apparently the tusk of the mammoth.
- Egerton, P. G.** 1837 A
On certain peculiarities in the cervical vertebrae of the *Ichthyosaurus*, hitherto unnoticed.
Trans. Geol. Soc. London (2), v, pp. 187-193, with pl. xiv.
For a preliminary statement see Proc. Geol. Soc. Lond., ii, 1837, p. 192.
- 1845 A
Description of the mouth of a *Hybodus* found by Mr. Boscawen Ibbetson on the Isle of Wight.
Quart. Jour. Geol. Soc., i, pp. 197-199, with pl. iv.
- Egerton, P. G.—Continued.** 1847 A
On the nomenclature of the fossil Chimeroid fishes.
Quart. Jour. Geol. Soc. Lond., iii, pp. 350-353, with pl. xiii and 1 fig. in the text.
- 1847 B
Fossil fish [of coal-field of eastern Virginia].
Quart. Jour. Geol. Soc. Lond., iii, pp. 275-280.
- 1848 A
Palichthyologic notes. Supplemental to the works of Professor Agassiz.
Quart. Jour. Geol. Soc. Lond., iv, pp. 302-314, with pl. x and 2 figs. in the text.
This paper is devoted to the consideration of the structure of *Pterichthys* and the description of new species.
- 1848 B
Observations on Mr. McCoy's paper on "Some fossil fish of the Carboniferous period."
Ann. and Mag. Nat. Hist. (2), ii, pp. 189-190.
- 1849 A
Palichthyologic notes. No. 2. On the affinities of the genus *Platysomus*.
Quart. Jour. Geol. Soc., v, pp. 329-332.
- 1849 B
Palichthyologic notes. No. 3. On the *Ganoidei heterocerci*.
Quart. Jour. Geol. Soc. Lond., vi, pp. 1-10, with pl. ii.
- 1852 A
Lepidotus pectinatus.
Mem. Geol. Surv. United Kingdom, decade 6, no. iii, pp. 1-2, with pl. iii.
- 1852 B
Ptycholepis minor Egerton.
Mem. Geol. Surv. United Kingdom, decade 6, no. vii, pp. 1-3, pl. vii.
- 1853 A
Notes on the fossil fish from Albert mine.
Quart. Jour. Geol. Soc. Lond., ix, p. 115.
A brief identification of the fishes collected at Albert mine, New Brunswick, by Charles Lyell.
- 1853 B
Palichthyologic notes. No. 4. On the affinities of the genera *Tetragonelepis* and *Dapedius*.
Quart. Jour. Geol. Soc. Lond., ix, pp. 274-279, with pl. xi.
- 1857 A
Palichthyologic notes. No. 9. On some fish remains from the neighborhood of Ludlow.
Quart. Jour. Geol. Soc., London, xiii, pp. 282-289, with pls. ix, x.

Egerton, P. G.—Continued. 1857 B

On the unity of the genera *Pleuracanthus*, *Diplodus*, and *Xenacanthus*, and on the specific distinction of the Permian fossil *Xenacanthus decheni* (Beyrich.)

Ann. and Mag. Nat. Hist. (2), xx, pp. 423-424.

1859 A

Palichthyologic notes. No. 12. Remarks on the nomenclature of the Devonian fishes.

Quart. Jour. Geol. Soc., xvi, pp. 119-136.

1859 B

On *Chondrosteus*, an extinct genus of the *Sturionidae*.

Philosoph. Trans. Roy. Soc. Lond., cxlviii, pp. 871-875; pls. 67-70.

1861 A

Remarks on the ichthyolites of Farnell road.

Report Brit. Assoc. Adv. Sci., 30th meeting, Oxford, 1860, pp. 77-78.

Description of *Acanthodes mitchelli*.

1861 B

British fossils.

Mem. Geol. Sur. United Kingdom, decade 10, pp. 51-75; pls. iv-x.

Descriptions and figs. of *Tristichopterus*, *Acanthodes*, *Climacodus*, and *Diplacanthus*.

1862 A

On a new species of *Pterichthys* (*P. macrocephalus*, Egerton), from the yellow sandstone of Farlow Co., Salop.

Quart. Jour. Geol. Soc., xviii, pp. 103-106, with pl. iii, figs. 7-9.

1866 A

On a new species of *Acanthodes* from the Coal series of Longton.

Quart. Jour. Geol. Soc., xxii, pp. 468-470, with pl. xxiii.

1869 A

On two new species of *Gyrodon*.

Quart. Jour. Geol. Soc., xxv, pp. 379-386, with 5 text figs.

1871 A

On a new Chimæroid fish from the Lias of Lyme Regis (*Ischyodus orthorhinus* ♂)

Quart. Jour. Geol. Soc., xxvii, pp. 275-279, with pl. xiii.

Eichwald, Eduard. 1840 A

Die Thier- und Pflanzenreste des alten rothen Sandsteins und Bergkalks im Novgorodschen Gouvernement.

Bull. Sci. Acad. Imp. Sci. St. Pétersbourg, vii, pp. 78-91.

Eichwald, Eduard—Continued. 1846 A

Nachtrag zu der Beschreibung der Fische des devonischen Systems aus der Gegend von Pawlowsk.

Bull. Soc. Imp. Nat. Moscou, xix, pt. ii, pp. 277-318.

1857 A

Beitrag zur geographischen Verbreitung der fossilen Thiere Russlands.

Bull. Soc. Imp. Nat. Moscou, xxx, pt. ii, pp. 305-354.

Pp. 338-354 are devoted to the fossil vertebrates. Of most interest are some remarks on *Asterolepis* and *Bothriolepis*.

1860 A

Lethæa Rossica ou Paléontologie de la Russie.

Vol. i, pp. 1493-1633, with pls. lv-lxx.

Only the pages of this volume are quoted here which contain matter bearing on the vertebrates.

1866 A

Die *Rhytina borealis* und der *Homoncrinus dipentus* in der Lethæa Rossica.

Bull. Soc. Imp. Nat. Moscou, xxxix, pp. 138-162, with pl. viii.

The plate illustrates the structure of *Homoncrinus*.

1868 A

Lethæa Rossica ou Paléontologie de la Russie.

Vol. ii, pp. 1195-1285, with pls. xxviii-xl, of vol. ii of atlas.

Only those pages of this volume are quoted which contain descriptions of vertebrates.

1871 A

Analekten aus der Palæontologie und Zoologie Russlands.

Moscow, 1871, 4to, pp. i-iv; 1-23, with pls. i-iii.

Contains description and figures of *Palæoteuthis marginalis* Eichw., pp. 1-15, pl. i.

Eigenmann, C. H. 1890 A

Description of a fossil species of *Sebastodes*.

Zoe, i, p. 17, with 1 fig.

Describes propelece of *Sebastodes* (?) *rosæ* from Tertiary beds at Port Halford, Cal.

Emerton, J. H. 1887 A

The restoration of the skeleton of *Dinoceras mirabile*.

Proc. Boston, Soc. Nat. Hist. xxiii, pp. 342-343.

Emery, Carl,

Die fossilen Reste von *Archegosaurus* und *Eryops* und ihre Bedeutung für die Morphologie des Gliedmassenskelets.

Anatom. Anzeiger, xiv, pp. 202-208, with 7 figs. in the text.

- Emery, Carl**—Continued. 1897 B
 Ueber die Beziehungen des Crossopterygiums zu anderen Formen der Gliedmassen der Wirbeltiere.
 Anatom. Anzeiger, xiii, pp. 137-149, with 6 figs. in the text.
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- 1897 C
 Beiträge zur Entwicklungsgeschichte und Morphologie des Hand-und Fuss-skelets der Marsupialier.
 Semon's Zoolog. Forschungsreisen in Australien, etc., ii, pp. 371-400, with pls. xxxiii-xxxvi, with 13 text figs.
 On p. 400 is found a record of the literature examined.
- Emmons, Ebenezer.** 1845 A
 On the supposed *Zeuglodon cetoides* of Professor Owen.
 Amer. Quart. Jour. Agricult. and Sci., ii, pp. 59-63, with 1 page of figs.
-
- 1845 B
 The *Zeuglodon cetoides* (Owen).
 Amer. Quart. Jour. Agricult. and Sci., ii, p. 366.
-
- 1846 A
 Description of some of the bones of the *Zeuglodon cetoides* of Professor Owen.
 Amer. Quart. Jour. Agricult. and Sci., iii, pp. 223-231, with pls. i, ii.
-
- 1851 A
 Description of some of the bones of the *Zeuglodon cetoides* of Professor Owen.
 Pp. 1-6. Year and place of publication unknown. Copy deposited in Smithsonian Institution November 13, 1851.
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- 1856 A
 Geological report on the midland counties of North Carolina. Illustrated with engravings.
 Pp. i-xx; 1-352; pls. 1-8. New York, Geo. P. Putnam & Co. Raleigh, Henry D. Turner, 1856.
 Chap. xl, pp. 293-323, and p. 347 are devoted to the "animal remains of the Coal Measures of the Deep and Dan rivers," and to a "notice of the vertebral remains of the Bristol conglomerate."
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- 1857 A
 American geology, containing a statement of the principles of the science, with full illustrations of the characteristic American fossils, with an atlas and a geological map of the United States.
 Part vi, pp. i-x; 1-152, with pls. i-x, and 114 figs. in the text.
-
- 1858 A
 Fossils of the sandstones and slates of North Carolina.
 Proc. Amer. Assoc. Adv. Sci., 11th meeting, Montreal, 1857, pp. 76-80.
- Emmons, Ebenezer**—Cont'd. 1858 B
 Report of the North Carolina Geological Survey. Agriculture of the eastern counties, together with descriptions of the fossils of the marl beds.
 Illustrated by engravings. Raleigh, 1858.
 Pp. i-xv; 1-314.
 Chapters xv-xvii are devoted to descriptions of the fossil vertebrates, and there are furnished 83 woodcuts in the text.
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- 1860 A
 Manual of geology. Second edition.
 Pp. i-viii; 1-297, with 218 figs. New York, 1860.
- Etheridge, Robert, and Willett, Henry.** 1889 A
 On the dentition of *Lepidotus maximus*, etc.
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- 1860 C
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Filhol, Henri.

1872 A

Récherches sur les mammifères fossiles des depots de phosphate de Chaux dans les départements du Lot, du Tarn et de Tarn-et-Garonne.

Annales sci. géol., iii, art. 7, pp. 1-31, with pls. 13-19.

1874 A

Nouvelles observations sur les mammifères des gisements de phosphates de Chaux (Lémuriens et Pachylémuriens).

Annales sci. géol., v, art. 4, pp. 1-36, with pls. vii and viii.

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1876 A

Recherches sur les phosphorites du Quercy. Étude des fossiles qu'on y rencontre et spécialement des mammifères.

Annales sci. géol., vii, art. 7, pp. 1-220, with pls. x-xxxvi.

1877 A

Recherches sur les phosphorites du Quercy. Étude des fossiles qu'on y rencontre et spécialement des mammifères.

Annales sci. géol., viii, art. 1, pp. 1-340, with pls. i-xxviii.

1881 A

Étude des mammifères fossiles de Saint-Gérard-le-Puy (Allier). Seconde partie (1).

Annales sci. géol., xi, pp. 1-86, with pls. i-xx.

1882 A

Étude des mammifères fossiles de Ronzon (Haute-Loire).

Annales sci. géol., xii, art. 3, pp. 1-271, with pls. vi-xxxix.

1882 B

Observations relatives aux caractères ostéologiques de certaines espèces d'*Eudectes* et de *Spheniscus*.

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1883 A

Notes sur quelques mammifères fossiles de l'époque miocène.

Archives du Muséum d'Histoire Naturelle de Lyon, lii, pp. 1-97, pls. i-v.

1. Observations relatives à divers mammifères fossiles provenant de Saint-Gérard-le-Puy (Allier), pp. 1-42.

2. Observations relatives aux carnassiers signalé par Jourdan sous le nom de *Dinocyon thenardi*, pp. 43-53.

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Filhol, Henri—Continued.

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1883 B

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Annales sci. géol., xiv, art. 5, pp. 1-51.

1884 A

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Annales sci. géol., xvi, art. 4, pp. 1-10, with pl. ix.

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1885 A

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Annales sci. géol., xvii, art. 5, pp. 1-18, with pl. vi.

1888 A

Études sur les vertébrés fossiles d'Issel (Aude).

Mem. soc. géol. de France (3), v, pp. 1-188, with pls. 1-21.

Devoted principally to the genus *Lophiodon* and its species and to *Pachynolophus*.

1888 B

Caractères de la face du *Muchairodus bidentatus*.

Bull. Soc. Philomat. de Paris (7), xii, pp. 129-134.

1891 A

Études sur les mammifères fossiles de Sansan.

Annales sci. géol., France, xxi, pp. 1-319, with pls. i-xlvi.

1891 B

De la dentition supérieure de l'*Aythia* *theracotherium minimum*.

Bull. Soc. Philomat., Paris (8), iii, pp. 89-91, with 2 figs. in the text.

1894 A

Observations concernant quelques mammifères fossiles nouveaux du Quercy.

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Proc. Acad. Nat. Sci., Phila., xi, p. 194.
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Die Stammesverwandschaft der Nager (*Rodentia*) mit den Beuteltieren (*Marsupialia*).
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Die Grundform der Backzähne bei Säugethieren und die Homologie der einzelnen Höcker.
Math. naturwiss. Mittheil. k.-p. Akad. Wissensch., Berlin, 1891, pp. 405-417, with pl. v.
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Notes on the skeletons of whales in the principal museums of Holland and Belgium, with descriptions of two species apparently new to science.
Proc. Zool. Soc. Lond., 1864, pp. 384-426, with 17 figs. in the text.
- 1867 A
Description of the skeleton of *Inia geoffrensis* and of the skull of *Pontoporia blainvillii*, with remarks on the systematic position of these animals in the order *Cetacea*.
Trans. Zool. Soc. Lond., vi, pp. 87-116, with pls. xxv-xxviii.
- 1868 A
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Proc. Zool. Soc. Lond., 1868, pp. 378-380.
- 1868 B
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Trans. Zool. Soc. Lond., vi, pp. 309-372, with pls. lv-lxi and 13 figs. in the text.
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Jour. Anat. and Physiol., iii, pp. 262-263, with 6 figs. in the text.
- 1869 B
On the value of the characters of the base of the cranium in the classification of the order *Carnivora*, and on the systematic position of *Bassaris* and other disputed forms.
Proc. Zool. Soc. Lond., 1868, pp. 4-37, with 15 text figs.
- 1871 A
On the ziphoid whales.
Nature, v, pp. 103-106.
- 1871 B
On the composition of the carpus of the dog.
Jour. Anat. and Physiol., vi, pp. 62-64, with 1 text fig.
- 1872 A
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Trans. Zool. Soc. Lond., viii, pp. 203-234, with pls. xxvii-xxix.
- 1873 A
Hunterian lectures. *Artiodactyla*.
Nature, vii, pp. 428-430.
Abstract of three lectures.
- 1874 A
On the structure and affinities of the musk deer (*Moschus moschiferus*).
Proc. Zool. Soc. Lond., 1874, pp. 159-190, with 14 figs. in the text.
- 1876 A
On some cranial and dental characters of the existing species of rhinoceroses.
Proc. Zool. Soc. Lond., 1876, pp. 443-457, with 4 figs. in the text.
- 1876 B
Hunterian lectures on the relations of extinct to existing *Mammalia*.
Nature, xiii, pp. 307-308; 327-328; 350-352; 387-388; 409-410; 449-450; 487-488; 513-514; vol. xiv, p. 11.
Abstract of a course of lectures at the Royal College of Surgeons.
- 1876 C
The extinct animals of North America.
Proc. Roy. Institution, Great Britain, viii, pp. 103-125, with 3 figs. in the text.
A popular lecture on the fossil *Mammalia* of North America.

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Encyclop. Brit., ed. 9, xii, pp. 172-181, with 6 figs. in the text.
To this article is subjoined a bibliography of the subject.
- 1882 A
On the mutual affinities of the animals composing the order *Edentata*.
Proc. Zool. Soc. Lond., 1882, pp. 358-367.
- 1882 B
Lemur.
Encyclop. Brit., ed. 9, xiv, pp. 440-445, with 6 text figs.
A portion of this article is devoted to extinct *Lemuroidea*.
- 1883 A
On the arrangement of the orders and families of existing *Mammalia*.
Proc. Zool. Soc. Lond., 1883, pp. 178-186.
- 1883 B
On the characters and divisions of the family *Delphinidae*.
Proc. Zool. Soc. Lond., 1883, pp. 466-513, with 9 figs. in the text.
- 1883 C
Mammoth.
Encyclop. Brit., ed. 9, xv, pp. 447-448, with 2 figs. in the text.
- 1883 D
Mammalia.
Encyclop. Brit., ed. 9, xv, pp. 347-446, with 123 figs. in the text.
This article treats of the anatomy and classification of the *Mammalia*, together with general descriptions of the various orders and families. The portions on the *Insectivora*, *Chiroptera*, and *Rodentia* were furnished by Dr. G. E. Dobson.
- 1885 A
An introduction to the osteology of the *Mammalia*. Third edition, revised with the assistance of Hans Gadow.
London: Macmillan & Co., 1885, pp. 383, figs. 134.
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An introduction to the study of mammals living and extinct.
London, pp. 763, figs. 357. 8vo. 1891.
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Observations on the development of the rostrum of the cetacean genus *Mesoplodon*, with remarks on some of the species.
Proc. Zool. Soc. Lond. 1893, pp. 216-236, with pls. xii-xv and 1 page of text figs.
- Forshey, C. G.** 1846 A
[Communication regarding cranium of bear found near Natchez, Miss., and supposed to be that of the polar bear.]
Proc. Bost. Soc. Nat. Hist., ii, p. 163.
- Foster, J. W.** 1837 A
Miscellaneous observations made during a tour in May, 1835, to the falls of the Cuyahoga, near Lake Erie; extracted from the diary of a naturalist.
Amer. Jour. Sci., xxxi, pp. 1-84.
Description of a fossil "*Ovis mammillaris*," figs. 19, and of a fossil beaver (*Castoroides*), figs. 16-18.
- 1838 A
Organic remains.
2d annual report Geol. Surv. Ohio, pp. 79-83, with text figs. A-D.
A portion of Foster's report to the State geologist.
- 1839 A
Head of *Mastodon giganteum*.
Amer. Jour. Sci., xxxvi, pp. 189-191, with 1 fig.
- 1849 A
Remarks on geological position of the mastodon.
Proc. Nat. Hist. Soc. Boston, iii, pp. 111-117.
Accompanied by remarks by Professor Rogers, Dr. Pickering, and Mr. Desor.
- 1857 A
On the geological position of the deposits in which occur the remains of the fossil elephant of North America.
Proc. Amer. Assoc. Adv. Sci., 10th meeting, Albany, 1856, pp. 148-169.
- 1872 A
A new species of elephant.
Nature, vi, p. 443.
Reports the proposal before Amer. Soc. Adv. Sci., by Foster, of a supposed new species of fossil elephant from Indiana, *E. mississippiensis*. No description given.
- Foulke, William P.** 1858 A
[Statement respecting fossil bones of *Hadrosaurus*.]
Proc. Acad. Nat. Sci. Phila., 1858, pp. 213-215.
- Fraas, Eberhard.** 1885 A
[Review of W. Dames: Ueber *Archæopteryx* in Palæontologische Abhandlungen.]
Neues Jahrbuch Min., Geol., und Palæontol., i, 1885, pp. 470-472. Referate.
See Dames, W., 1884 B.
- 1888 A
Ueber die Finne von *Ichthyosaurus*.
Jahreshefte Ver. f. vaterl. Naturk. Württemberg, xlv, pp. 280-303, with pl. vii.

- Fraas, Eberhard**—Continued. 1889 A
Die Labyrinthodonten der schwäbischen Trias.
Paläontographica, xxxvi, 1-158, with pls. i-xvii.
- 1891 A
Die Ichthyosaurier der Süddeutschen Trias- und Jura- Ablagerungen.
Pp. 1-81, with pls. i-xiv.
Contains a history of this subject and a discussion of the anatomy of ichthyosaurs.
Pp. 80-81 are occupied by a list of papers and memoirs on the *Ichthyosauria*.
- 1892 A
The paddles and fins of *Ichthyosaurus*.
Geol. Magazine (3), ix, pp. 516-517, with 2 figs. in the text.
- 1892 B
Ichthyosaurus numismalis E. Fraas.
Jahreshefte Ver. f. vaterl. Naturk. Württemberg, xlviii, pp. 22-31.
- 1894 A
Die Hautbedeckung von *Ichthyosaurus*.
Jahreshefte Ver. f. vaterl. Naturk., Württemberg, l., pp. 493-497, with pl. v.
- 1896 A
Neue Selachier-Reste aus dem oberen Lias von Holzmaden in Württemberg. I. *Hybodus hauffianus* E. Fraas (= *Hybodus reticulatus* Quenstedt, non Agassiz). II. *Palaespinax smith-woodwardii* E. Fraas.
Jahreshefte Ver. f. vaterl. Naturk. Württemberg, lii, Abh., pp. 1-25, with pls. i, ii.
- 1898 A
Ein neues Exemplar von *Ichthyosaurus* mit Haut-Bekleidung.
Földtani Közlöny, xxviii, pp. 169-173, with pl. ii.
- 1899 A
Proganochelys quenstedtii Baur (*Psammodochelys keuperina* Qu.). Ein neuer Fund der Keuperschildkröte aus dem Stubensandstein.
Jahreshefte Ver. f. vaterl. Naturk. Württemberg, lv, pp. 401-424, with pls. v-viii, and 5 figs. in the text.
- Fraas, Oscar.** 1861 A
Ueber *Semionotus* und einige Keuper-Conchyliden.
Jahreshefte Ver. f. vaterl. Naturk. Württemberg, xvii, pp. 81-101.
- 1867 A
Dyoplaea arenaceus, ein neuer Stuttgarter Keuper-Saurier.
Jahreshefte Ver. f. vaterl. Naturk. Württemberg, xxiii, pp. 109-112, with pl. i.
- Franque, Henricus.** 1847 A
Nonnulla ad Amiam calvam accuratius cognoscendam.
Pp. 12, with 1 pl.
Inaugural dissertation.
- Frenkel, F.** 1873 A
Beiträge zur anatomischen Kenntniss des Kreuzbeines der Säugethiere.
Jenaische Zeitschr. f. med. Naturwiss., (1) vii pp. 391-437, with pls. xxi, xxii.
- Fricke, Karl.** 1875 A
Die fossile Fische aus der Oberen Juraschichten von Hannover.
Paläontographica, xxii, 347-398, pls. xviii-xxii.
- Fritsch, Anton.** 1876 A
Ueber die Fauna der Gaskohle des Pilsner und Rakonitzer Beckens.
Sitzungsber. k. böhmischen Gesellsch. der Wissensch. in Prag, Jahrgang 1875, pp. 70-79.
- 1878 A
Die Reptilien und Fische der böhmischen Kreideformation.
Pp. i, ii, 1-46, with 10 pls. and 66 wood cuts. Prag., 1878.
- 1883 A
Fauna der Gaskohle und der Kalksteine der Permformation Böhmens.
Pp. 1-182, with pls. i-xlvi.
Pp. 1-92 were published in 1879; pp. 93-126, 1880; pp. 127-158, 1881; pp. 159-182, 1883.
- 1888 A
Ueber die Brustflosse von *Xenacanthus decheni*, Goldf.
Zoolog. Anzeiger, xi, pp. 113-114, with 1 fig. in the text.
- 1889 A
Ueber *Xenacanthus*.
Zoolog. Anzeiger, xii, pp. 386-387.
- 1889 B
Fauna der Gaskohle und der Kalksteine der Permformation Böhmens. Zweiter Band. *Stegocephali* (Schluss). *Dipnoi*, *Selachii* (Anfang).
Pp. 1-114, with 42 pls. and 79 text figs.
Pp. 1-32 are dated 1885; pp. 33-64, 1885; pp. 65-92, 1888; pp. 93-114, 1889.
- 1890 A
Über Pterygopodien permischer Haifische der Gattungen *Pleuracanthus* und *Xenacanthus*.
Zoolog. Anzeiger, xiii, pp. 318-320, with 1 fig. in text.
- 1890 B
Preliminary notes on the palaeozoic Elasmobranchs, *Pleuracanthus* and *Xenacanthus*.
Geol. Magazine, (3), vii, p. 566.

Fritsch, Anton—Continued. 1891 A

Restorations of the Paleozoic Elasmobranch genera *Pleuracanthus* and *Xenacanthus*.

Report Brit. Assoc. Adv. Sci., 60th meeting, Leeds, 1890, p. 822.

1891 B

Über die Xenacanthiden.

Zoolog. Anzeiger, xiv, pp. 21–22 (with restored figure of an old female of *X. decheni*).

1895 A

Fauna der Gaskohle und der Kalksteine der Permformation Böhmens.

Vol. iii, pp. 1–132, pls. 91–132, and text figs. 189–310.

Pp. 1–48 are dated 1890; pp. 49–80, 1893; pp. 81–104, no date, 1894; pp. 105–132, 1895.

This volume is devoted to the genus *Pleuracanthus*, the *Acanthodidae*, *Megalichthys*, *Palæoniscidae*, etc.

Review of part ii by A. S. Woodward, in Natural Science, ii, pp. 435–438, with 3 figs.

1895 B

Ueber neue Wirbelthiere aus der Permformation Böhmens, nebst einer Uebersicht der aus derselben bekannt gewordenen Arten.

Sitzungsber. k. böhm. Gesellsch. Wissensch., 1895, lii, pp. 1–17, with 1 text fig.

Fry, Edward. 1846 A

On the osteology of the active gibbon (*Hylobates agilis*).

Proc. Zool. Soc. Lond., 1846, pl. xiv, pp. 11–18.

Fürbringer, Max. 1885 A

Über das Schulter- und Ellenbogengelenk bei Vögeln und Reptilien.

Morpholog. Jahrbuch, xi, pp. 118–120.

1885 B

Über die Nervenkanäle im Humerus der Amnioten.

Morpholog. Jahrbuch, xi, pp. 484–486.

1888 A

Untersuchungen zur Morphologie und Systematik der Vögel, zugleich ein Beitrag zur Anatomie der Stütz- und Bewegungsorgane.

Pp. 1–xlx; 1–1713, with 30 pls. Folio, Amsterdam, 1888.

If under the various genera and higher groups citations to particular pages of Fürbringer's work are found, it must be understood only that on those pages some special treatment is given such groups. The same genera and higher groups may be found mentioned anywhere throughout this splendid volume.

1889 A

Untersuchungen zur Morphologie und Systematik der Vögel, zugleich ein

Fürbringer, Max—Continued.

Beitrag zur Anatomie der Stütz- und Bewegungsorgane.

Biolog. Centralbl., ix, pp. 204–217, 385–396, 499–510.

1890 A

Untersuchungen zur Morphologie und Systematik der Vögel, zugleich ein Beitrag zur Anatomie der Stütz- und Bewegungsorgane.

Biolog. Centralbl., x, pp. 48–62, 326–341, 373–377, 491–504, 754–767.

1890 B

Ueber die systematische Stellung der *Hesperornithidae*.

Monatsschrift deutsch. Verein z. Schutze d. Vogelwelt, xv, pp. 488–513.

1892 A

Untersuchungen zur Morphologie und Systematik der Vögel, etc.

Biolog. Centralbl., xii, pp. 146–157; 722–729.

1892 B

L. Stejneger's Vogelsystem.

Jour. Ornithologie (4), xx, pp. 137–148.

1896 A

Untersuchungen zur Morphologie und Systematik der Vögel, zugleich ein Beitrag zur Anatomie der Stütz- und Bewegungsorgane. (Neunzehntes Stück).

Biolog. Centralbl., xvi, pp. 497–511.

1900 A

Zur vergleichenden Anatomie des Brustschulterapparates und der Schultermuskeln; iv Teil.

Jenaische Zeitschr. f. Naturwiss. Jena, xxxiv, pp. 215–718, with pls. xiii–xvii and 141 figs. in the text.

This work deals with the anatomy of the shoulder-girdle of reptiles. Pp. 597–682 were issued separately with the title "Beitrag zur Systematik und Genealogie der Reptilien," pp. 1–88; Inhaltsübersicht pp. 89–91.

Gadow, Hans. 1877 A

Anatomie des *Phaenicopterus roseus* Pall., und seine Stellung im System.

Jour. Ornithologie, xxv, pp. 382–396.

1885 A

On the anatomical differences in the three species of *Rhea*.

Proc. Zool. Soc. Lond., 1885, pp. 308–322, with 11 woodcuts in the text.

1888 A

Remarks on the numbers and on the phylogenetic development of the remnants of birds.

Proc. Zool. Soc. Lond., 1888, pp. 655–667,

- Gadow, Hans**—Continued. 1889 A
On the modifications of the first and second visceral arches, with especial reference to the homologies of the auditory ossicles.
Philosoph. Trans. Roy. Soc. Lond., clxxix, pp. 461-485, pls. lxxi-lxxiv.
- 1891 A
Vögel.
Bronn's Klassen und Ordnungen des Thier-Reichs, vi, pp. 91-1008, with pls. xviii-lxx.
Pp. 1-90 of this work, written by E. Selenka, and published in 1869, are devoted to the osteology of birds. Pages 934-995 treat of the development of the skeleton. On pp. 934-939 is an important list of works on the development of the skeleton.
- 1892 A
On the classification of birds.
Proc. Zool. Soc. Lond., 1892, pp. 229-256.
- 1896 A
On the evolution of the vertebral column of *Amphibia* and *Amniota*.
Philos. Trans. Roy. Soc. Lond. (B), clxxxvii, pp. 1-57, with 56 figs. in the text.
Appended is a list of 93 memoirs and papers on the subject.
- 1896 B
[Articles in Newton's Dictionary of Birds, 1893-1896.]
- 1897 A
Remarks on the supposed relationship of birds and dinosaurs.
Proc. Cambridge Philos. Soc., ix, pp. 204-208.
- 1898 A
A classification of *Vertebrata*, recent and extinct.
London, Adam and Charles Black, 1898, 8vo, pp. i-x; 1-82.
- 1899 A
Orthogenetic variation in the shells of *Chelonia*.
Proc. Cambridge Philosoph. Soc., x, pp. 35-37.
- and **Abbott, E. C.** 1895 A
On the evolution of the vertebral column of fishes.
Philosoph. Trans. Royal Soc., Lond. clxxxvi, pp. 163-221, illustrated by numerous text-figs.
- Garman, Samuel.** 1884 A
A peculiar selachian.
Science, iii, pp. 116-117, with 1 woodcut.
Describes *Chlamydoselachus anguineus* Garman.
- 1884 B
The oldest living type of vertebrate, *Chlamydoselachus*.
Science, iii, p. 345.
Rejoinder to Prof. E. D. Cope.
- Garman, Samuel**—Continued. 1884 C
The oldest living type of vertebrate.
Science, iv, p. 484.
Discusses relationships of *Chlamydoselachus*; also includes a classification of the *Selachii*.
- 1884 D
An extraordinary shark.
Bull. Essex Institute, xvi, pp. 47-52, with 1 page of figs.
Description of new species and genus, *Chlamydoselachus anguineus* Garman, belonging to the new family *Chlamydoselachidae*.
- 1885 A
On the frilled shark.
Proc. Amer. Assoc. Adv. Sci., 33d meeting, Phila., 1884, pp. 537-538.
Refers to *Chlamydoselachus anguineus*.
- 1885 B
Chlamydoselachus anguineus Garm.
A living species of cladodont shark.
Bull. Mus. Comp. Zool., xii, pp. 1-35, with pls. i-xx.
- 1892 A
The *Discoboli*, *Cyclopteridae*, *Liparopsidae*, and *Liparididae*.
Mem. Mus. Comp. Zool., xiv, No. 2, pp. 1-96, pls. i-xiii.
- Garrod, A. H.** 1873 A
On the affinities of *Dinoceras* and its allies.
Nature, vii, p. 481.
Places *Dinoceras* among *Artiodactyla*.
- 1873 B
On the order *Dinocerata* (Marsh).
Jour. Anat. Physiol., vii, pp. 267-270, with 1 fig.
A statement of Marsh's results; nothing new is put forth.
- 1876 A
On some anatomical characters which bear upon the major divisions of the passerine birds. Part I.
Proc. Zool. Soc. Lond., 1876, pp. 506-519, with pls. xlviii-liii.
- 1877 A
Note on the solid-hoofed pigs in the society's collection.
Proc. Zool. Soc. Lond., 1877, p. 33.
- Gaudin, C.**
See **Pictet, Gaudin and Harpe**.
- Gaudry, A.** 1872 A
Sur une dent d'*Elephas primigenius* trouvée par M. Pinard dans l'Alaska.
Comptes rend. Acad. Paris, lxxv, pp. 1281-1282.
- 1873 A
Sur une dent d'*Elephas primigenius* trouvée par M. Pinard dans l'Alaska.
Bull. Soc. Géolog. de France (3), i, pp. 123-124.

- Gaudry, A.—Continued.** 1875 A
 Sur la découverte de batraciens dans le terrain primaire.
 Bull. Soc. Géolog. de France (3), iii, pp. 299-306, pls. vii, viii.
- 1875 B
 Sur quelques pièces de mammifères fossiles qui ont été trouvées dans les phosphorites du Quercy.
 Jour. Zoologie, iv, pp. 518-527, with pl. xviii.
- 1877 A
 Letter to Count de Saporta on North American vertebrate palæontology.
 Amer. Naturalist, xi, pp. 184-186.
- 1878 A
 Sur les reptiles des temps primaires.
 Comptes rend. Acad. Sci. Paris, lxxxvii, pp. 956-958.
 Describes structure of the vertebrae of *Actinodon* and the occurrence of pleurocentra therein.
- 1878 B
 Les enchainements du monde animal dans les temps géologiques. Mammifères tertiaires.
 Paris, 1878. 8°. Pp. 1-295, with 312 figs. in the text.
- 1883 A
 Les enchainements du monde animal dans les temps géologiques. Fossiles primaires.
 Paris, 1883. Pp. 1-319, with 285 figs. in the text.
 Pp. 218-250 are devoted to the fishes; pp. 251-288 to the batrachians and the reptiles.
- 1885 A
 Sur les dinocératidés que M. Marsh a recueillis dans l'éocène du Wyoming.
 Comptes rend. Acad. Paris, ci, pp. 718-720.
- 1889 A
 Restauration du squelette du *Dinoceras*.
 Comptes rend. Acad. Paris, cviii, p. 1292.
- 1890 A
 Remarques sur le nom générique d'*Hipparion*.
 Bull. Soc. Géolog. de France (3), xviii, pp. 189-191.
- 1890 B
 Apparences d'inégalité dans le développement des êtres de l'ancien et du nouveau continent.
 Comptes rend. Acad. Paris, cx, pp. 482-483.
- 1890 C
 Les enchainements du monde animal dans les temps géologiques. Fossiles secondaires.
 8vo, pp. 1-323, with 403 figs. in the text; Paris, 1890.
 Pp. 169-305 of this work are devoted to the *Vertebrata*.
- Gaudry, A.—Continued.** 1891 A
 Similitudes dans la marche de l'évolution sur l'ancien et le nouveau continent.
 Bull. Soc. Géolog. de France (3), xix, pp. 1024-1035.
- 1891 B
 Quelques remarques sur les mastodontes à propos de l'animal du Chérichira.
 Mém. Soc. Géolog. de France, ii, Mém. No. 8, pp. 1-6, with pls. i, ii.
- 1892 A
 Les Pythonomorphes de France.
 Mém. Soc. Géolog. de France. Paléontologie, iii, No. 10, pp. 1-13, with pls. xvii, xviii.
- 1895 A
 Sur les cornes des dinocératidés.
 Actes Soc. Scient., Chili, v, pp. cxlii-cxliii.
- 1897 A
 La dentition des ancêtres des tapirs.
 Bull. Soc. Géolog. de France (3), xxv, pp. 315-325, with pl. x.
 See also Comptes rendus Acad. Sci., cxxv, pp. 755-756.
- Gaupp, Ernst.** 1891 A
 Zur Kenntniss des Primordial-Craniums der Amphibien und Reptilien.
 Verhandl. anatom. Gesellsch., 5th meeting, Munich, 1891, pp. 114-120.
- 1894 A
 Zur vergleichenden Anatomie der Schläfengegend am knöchernen Wirbelthiere.
 Schwalbe's Morpholog. Arbeiten, iv, pp. 77-131, pls. vi, vii.
 Cites the literature of the subject.
- 1895 A
 Mittheilungen zur Anatomie des Frosches.
 Anat. Anzeiger, xi, pp. 1-8, with 5 figs.
 This paper treats of the carpus and tarsus of the frog.
- 1895 B
 Ueber die Jochbogen-Bildungen am Schädel der Wirbelthiere.
 Jahresber. schles. Gesellsch. vaterl. Cultur, ii Abth., pp. 56-63.
- 1898 A
 Zur Entwicklungsgeschichte des Eidechschens. Schädel.
 Berichte naturforsch. Gesellsch. zu Freiburg i. B., x, pp. 302-316.
- 1900 A
 Das Chondrocranium von *Lacerta agilis*. Ein Beitrag zum Verständnis des Amniotenschädel.
 Merkel und Bonnets Anat. Hefte, xv (Heft xlix), pp. 435-496, with pls. xlii-xlvii, and 23 figs. in the text.

- Gazley, Sayres.** 1830 A
Notice of osseous remains at Big Bone
Lick, Kentucky.
Amer. Jour. Sci. (1), xviii, pp. 139-141.
The above communication is an anonymous
one, but the author's name is given in Amer.
Jour. Sci., xx, p. 372.
- Gegenbaur, Carl.** 1864 A
Untersuchungen zur vergleichenden
Anatomie der Wirbelthiere. Erstes
Heft. Carpus und Tarsus.
Pp. i-vi; 1-127, with 6 pls. Leipzig, 1864.
- 1865 A
Vergleichend-anatomische Bemerkungen
über das Fuss skelet der Vögel.
Archiv f. Anat. Physiol. u. wissensch. Med.,
Jahrg. 1865, pp. 450-472, with 4 text figs.
- 1865 B
Untersuchungen zur vergleichenden
Anatomie der Wirbelthiere. Zweites
Heft: 1. Schultergürtel der Wirbel-
thiere. 2. Brustflosse der Fische.
Pp. i-iv; 1-176, with 9 pls. Leipzig, 1865.
- 1872 A
Untersuchungen zur vergleichenden
Anatomie der Wirbelthiere. Drittes
Heft. Das Kopfskelet der Selachier; ein
Beitrag zur Erkenntniss der Genese des
Kopfskeletes der Wirbelthiere.
Pp. i-x; 1-316, with 22 pls.
- 1872 B
Ueber das Archipterygium.
Jenaische Zeitschr. f. Med. u. Naturwiss.,
(1), vii, pp. 131-141, with pl. x.
- 1876 A
Zur Morphologie der Gliedmassen
der Wirbelthiere.
Morpholog. Jahrbuch, ii, pp. 396-420, with 4
figs. in the text.
- 1887 A
Die Metamerie des Kopfes und die
Wirbeltheorie des Kopfskeletes.
Morpholog. Jahrbuch, xiii, pp. 1-114.
Appended is a list of 59 titles of papers bear-
ing on the subject.
- 1895 A
Clavicula und Cleithrum.
Morpholog. Jahrbuch, xxiii, pp. 1-20, with
5 figs. in text.
- 1895 B
Das Flossenskelet der Crossoptery-
gier und das Archipterygium der Fische.
Morpholog. Jahrbuch, xxii, pp. 119-160, with
5 figs. in text.
- 1898 A
Vergleichende Anatomie der Wirbel-
thiere mit Berücksichtigung der Wir-
- Gegenbaur, Carl**—Continued.
bellosen. Erster Band. Einleitung,
Integument, Skeletsystem, Muskelsys-
tem, Nervensystem und Sinnesorgane.
Leipzig, 1898, 8vo; pp. i-xiv; 1-978, with 619
figs., some colored.
- Geinitz, Hans Bruno.** 1839 A
Characteristik der Schichten und
Petrefacten des sächsischen Kreidege-
birges.
Erstes Heft. Der Tunnel bei Obergau, etc.,
1839, pp. i-v; 1-29, with pls. i-viii. Zweites
Heft. A. Das Land zwischen dem Plauen'shen
Grunde bei Dresden und Dohna. B. Fische.
Crustaceen, Mollusken, 1840, pp. i-iv; 30-62,
with pls. ix-xvi. Drittes Heft. Die sächsisch-
böhmische Schweiz, die Oberlausitz und das
Innere von Böhmen, 1842, pp. 63-116; i-xxvi,
with pls. xvii-xxiv.
- 1847 A
Koch's *Hydrarchos harlani*.
Neues Jahrbuch f. Mineralogie, 1847, pp.
47-49.
- 1860 A
Zur Fauna des Rothliegenden und
Zechsteins.
Zeitschr. deutsch. geol. Gesellsch., xii, pp.
467-470.
Refers to the dorsal spine of *Xenacanthus*
decheni.
- 1861 A
Dyas, oder die Zechsteinformation
und das Rothliegende. Heft 1. Die
animalische Ueberreste der Dyas.
Pp. vii-xviii; 1-342, with 23 pls.
- 1868 A
Die fossilen Fischschuppen aus dem
Plänerkalke in Strehlen.
Denkschr. Gesellsch. Natur-u. Heilkunde,
Dresden, 1868, pp. 33-48, with pls. i-iv.
- 1875 A
Das Elbthalgebirge in Sachsen.
Zweiter Theil. Der mittlere und obere
Quader. VI. Würmer, Krebse, Fische
und Pflanzen.
Paläontographica, xx, pp. 199-245, with pls.
xxxvii-xlvi.
- 1883 A
Die sogenannten Koprolithenlager
von Helmstedt, Büddenstedt und
Schleweke bei Harzburg.
Abhandl. naturwiss. Gesellsch. Isis in Dres-
den, i, pp. 3-14, with pl. i, figs. 1-22.
- 1884 A
Ueber ein Graptolithen-führenden
Geschiebe mit *Cyathaspis* von Rostock.
Zeitschr. deutsch. geol. Gesellsch., xxxvi,
pp. 854-857, with pl. xxx.

Geinitz, Hans Bruno—Cont'd. 1885 A
Ueber Milchzähne der Mammuth,
(*Elephas primigenius*).

Festschrift naturw. Gesellsch. Isis in Dresden.
Feler 50 jährig. Bestehens, pp. 66-74, with pl.
iii.

The figures are those of the very young
animal.

Geinitz, H. B., and Deichmüller, J. V. 1882 A

Die Saurier der unteren Dyas von
Sachsen.

Palæontographica, xxix, pp. 1-46, with
9 pls.

Geissler, Gustav. 1895 A

Ueber neue Saurier-Funde aus dem
Muschelkalk von Bayreuth.

Zeitschr. deutsch. geol. Gesellsch., xlvii,
pp. 331-355, with pls. xiii, xiv.

Describes various portions of the skeleton of
Nothosaurus.

Gemmellaro, Gaetano Géorgio. 1857 A

Ricerche sui pesci fossili della Sicilia.

Atti dell' Accademia naturali di Catania
(2), xiii, pp. 279-328, with pls. i-vi.

George, —. 1869 A

Études zoologiques sur les Hémiones
et quelques autres espèces chevalines.

Annales Sci. Naturelles, Zool. (5), xii, pp.
5-58, pls. 1-4.

Gervais, Paul. 1839 A

[Remarks on *Megatherium*.]

Bull. Soc. Géolog. de France, x, p. 142.

— 1850 A

Mémoire sur la famille des cétacés
Ziphioides et plus particulièrement sur
le *Ziphius longirostris* de la Méditer-
ranée.

Ann. Sci. Naturelles (3), xiv, pp. 1-11.

— 1853 A

Recherches sur l'ostéologie de plu-
sieurs espèces d'amphisbènes, et remar-
ques sur la classification de ces reptiles.

Ann. Sci. Naturelles (3), xx, pp. 293-314, with
pl. xv.

— 1855 A

Recherches sur les mammifères fos-
siles de l'Amérique méridionale.

Castelnau's Exped. Amer. du Sud., pp. 1-63,
with pls. iv-xiii.

— 1859 A

Zoologie et paléontologie français.
Nouvelles recherches sur les animaux
vertébrés dont on trouve les ossements
enfouis dans le sol de la France et sur

Gervais, Paul—Continued.

leur comparaison avec les espèces
propres aux autres régions du globe.
Deuxième édition, accompagnée d'un
atlas de 84 planches et de figures inter-
calées dans le texte.

Paris, 1859, pp. i-viii; 1-544.

— 1862 A

Sur les *Squalodon*.

Bull. Acad. Roy. de Belgique (2), xiii, pp.
462-469.

Letter addressed to Van Beneden.

— 1871 A

Remarques sur l'anatomie des cétacés
de la division des Balénidés tirées de
l'examen des pièces relatives à ces ani-
maux que sont conservées au Muséum.

Nouv. Arch. du Mus. d'Hist. Nat. Paris, vii,
pp. 65-146, with pls. iii-ix.

— 1872 A

Ostéologie du *Sphargis luth* (*Sphargis*
coriacea).

Nouv. Arch. du Mus. d'Hist. Nat. Paris, viii,
pp. 199-228, with pls. v-ix.

An abstract of this memoir appeared in
Jour. Zoologie, ii, 1873, pp. 1-4.

— 1873 A

Recherches sur les Édentés tardi-
grades.

Jour. Zoologie, ii, pp. 463-469.

— 1874 A

Form typique des membres chez les
Équidés.

Jour. Zoologie, iii, pp. 300-307.

— 1874 B

Remarques sur les formes cérébrales
propres aux Thalassothériens.

Jour. Zoologie, iii, pp. 570-583.

— 1876 A

Remarques au sujet du genre *Phoco-*
don d'Agassiz.

Jour. Zoologie, v, pp. 62-70, with 2 figs. in
the text.

— 1876 B

Remarques au sujet du mémoire pré-
cédent [Marsh on *Brontotheriida*].

Jour. Zoologie, v, p. 255.

— 1878 A

Sur la dentition des Smilodons.

Comptes rend. Acad. Paris, lxxxvii, pp. 582-
583.

See also **Gervais** and **Ameghino**;
Van Beneden and **Gervais**.

Gervais, H., and Ameghino, F. 1880 A
Les mammifères fossiles de l'Amérique du Sud.

Pp. i-xi; 1-225. Buenos Aires and Paris: 1880. Contains list of about 300 fossil mammals, with diagnoses of new genera and species. About 60 of these species are regarded as new. See Branco, W., Jahresbuch Mineral., i, 1883, p. 300.

Ghigi, Alessandro. 1900 A
Sui denti dei Tapiridi.

Verhandl. anat. Gesellsch., xiv (Pavia), pp. 17-29, with 9 figs. in the text.

These Verhandlungen are found in the Ergänzungsheft of Anatom. Anzeiger, xviii.

Gibbes, Robert W. 1845 A
Description of the teeth of a new fossil animal found in the Green-sand of South Carolina.

Proc. Acad. Nat. Sci. Phila., 1845, ii, pp. 254-256, pl. i.

A notice of this paper is found in Amer. Jour. Sci., 1845, xlix, p. 216. Describes *Dorudon serratus*.

— 1846 A
On the fossil *Squalidæ* of the United States.

Proc. Acad. Nat. Sci. Phila., iii, pp. 41-43.

Contains a list of the species which this author had identified.

— 1847 A
Description of new species of *Squalidæ* from the Tertiary beds of South Carolina.

Proc. Acad. Nat. Sci. Phila., iii, pp. 266-268.

— 1847 B
On the fossil genus *Basilosaurus*, Harlan (*Zeuglodon* Owen), with a notice of specimens from the Eocene Green-sand of South Carolina.

Jour. Acad. Nat. Sci. Phila., (2), i, pp. 5-15, pls. i-v.

— 1848 A
[Letter from, to Dr. Morton regarding the genus *Dorudon*.]

Proc. Acad. Nat. Sci. Phila., iv, p. 57.

— 1848 B
Monograph of the fossil *Squalidæ*, of the United States.

Jour. Acad. Nat. Sci. Phila., 1848, pp. 139-147, pls. xviii-xxi.

— 1849 A
Monograph of the fossil *Squalidæ*, of the United States.

Jour. Acad. Nat. Sci. Phila., i, pp. 191-206, with pls. xxv-xxvii.

Gibbes, Robert W.—Cont'd. 1850 A
On *Mosasaurus* and other allied genera in the United States.

Proc. Amer. Assoc. Adv. Sci., 2d meeting, 1849, Cambridge, Mass., p. 77.

— 1850 B
New species of fossil *Myliobates*, from the Eocene of South Carolina, and new fossils from the Cretaceous, Eocene, and Pliocene of South Carolina, Alabama, and Mississippi.

Proc. Amer. Assoc. Adv. Sci., 2d meeting, Cambridge, Mass., 1849, pp. 198-194.

— 1850 C
Remarks on the fossil *Equus*.
Proc. Amer. Assoc. Adv. Sci., 3d meeting, Charleston, S. C., 1850, pp. 66-68.
From Ashley River, S. C.; supposed to be taken from Eocene deposits.

— 1850 D
Remarks on the northern *Elephas* of Prof. Agassiz.
Proc. Amer. Assoc. Adv. Sci., 3d meeting, Charleston, S. C., 1850, p. 69.

— 1850 E
Remarks on *Mastodon angustidens*.
Proc. Amer. Assoc. Adv. Sci., 3d meeting, Charleston, S. C., 1850, pp. 69-70.

— 1850 F
Fossils common to several formations.
Proc. Amer. Assoc. Adv. Sci., 3d meeting, Charleston, S. C., 1850, pp. 70-71.

— 1850 G
New species of *Myliobates*, from the Eocene of South Carolina, with other genera not heretofore observed in the United States.
Jour. Acad. Nat. Sci. Phila. (2), i, pp. 299-300.

— 1851 A
A memoir on *Mosasaurus* and three allied new genera, *Holcodrus*, *Conosaurus*, and *Amphorosteus*.
Smithsonian Cont. to Knowledge, ii, art. v, pp. 1-13; pl. i-iii.

Gidley, J. W. 1900 A
A new species of Pleistocene horse from the staked plains of Texas.
Bull. Amer. Mus. Nat. Hist., xiii, pp. 111-116, with 5 figs. in the text.
Describes *Equus scotti*.

Giebel, C. G. 1847 A
Fauna der Vorwelt, mit steter Berücksichtigung der lebenden Thiere. Erster Band: Wirbelthiere. Erste Abtheilung: Säugethiere.
Pp. i-xi; 1-233. Leipzig, 1847.

- Giebel, C. G.—Continued.** 1847 B
Fauna der Vorwelt, mit steter Berücksichtigung der lebenden Thiere. Erster Band: Wirbelthiere. Zweite Abtheilung: Vögel und Amphibia. Pp. i-xi; 1-218. Leipzig, 1847.
- 1847 C
Koch's *Hydrarchos*.
Neues Jahrb. Mineralogie, 1847, pp. 717-721.
- 1847 D
[Letter to Professor Brown.]
Neues Jahrb. Mineralogie, 1847, pp. 819-825.
Contains some observations on *Zeuglodon cetoides*.
- 1848 A
Fauna der Vorwelt, mit steter Berücksichtigung der lebenden Thiere. Erster Band: Wirbelthiere. Dritte Abtheilung: Fische.
Pp. i-xii; 1-467. Leipzig, 1848.
- 1852 A
Ueber die Gebissformel der Spitzmäuse.
Archiv Naturgesch., xviii, pp. 222-227.
- 1857 A
Zur Osteologie der Waschbären (*Procyon*).
Zeitschr. gesamt. Naturwiss., 1857, pp. 349-373.
- 1859 A
Zur Osteologie der Murmelthiere.
Zeitschrift gesamt. Naturwiss., xiii, pp. 299-309.
Describes osteology of *Arctomys monax*.
- 1866 A
Die Wirbelzahlen am Vogelskelet.
Zeitschr. gesamt. Naturwiss., xxviii, pp. 20-29.
A list showing the number of vertebræ occurring in each of 451 species of birds belonging to various orders and families.
- 1866 B
Osteologie der Klapperschlangen.
Zeitschr. gesamt. Naturwiss., xxviii, pp. 172-180.
The osteology of *Crotalus*.
- 1867 A
Schädel von *Dasypus gigas*.
Zeitschr. gesamt. Naturwiss., xxx, pp. 545-547.
- 1872 A
Schädel der *Felis concolor* F. *eyra*, und *F. yaguarundi*.
Zeitschr. gesamt. Naturwiss., xl, pp. 431-432.
- Giebel, C. G.—Continued.** 1877 A
Das Skelet des westafrikanischen *Crocodilus cataphractus*.
Zeitschr. gesamt. Naturwiss. (3), 1877, ii, pp. 105-113, with pls. 7-10.
- 1879 A
Marsh's neue Mittheilungen über die jurassischen Dinosaurier Nord-Amerikas.
Zeitschr. gesamt. Naturwiss. (3), iv, pp. 316-318.
A note on some of the genera of Dinosaurs described by Professor Marsh during the years 1878 and 1879.
- 1880 A
Charakteristik der Hasenschädel.
Zeitschr. gesamt. Naturwiss. (3), v, pp. 318-340, with pls. viii-x.
- Gilbert, G. K.** 1871 A
Remains of a mastodon.
Proc. Lyc. Nat. Hist. New York, 1871, pp. 220-221.
Describes geological position of mastodon found at St. Johns, Auglaize County, Ohio.
- Gilbert, J. Z.** 1898 A
On the skull of *Xerobates* (?) *undata* Cope.
Kansas Univ. Quarterly, vii, pp. 143-148, with 4 figs. in the text.
- Gill, Theodore.** 1861 A
Catalogue of the fishes of the eastern coast of North America.
Proc. Acad. Nat. Sci. Phila., 1861, pp. 1-63.
This paper has a pagination distinct from that of the remainder of the volume which contains it.
- 1862 A
Analytical synopsis of the order of *Squali*, and revision of the nomenclature of the genera.
Annals Lyc. Nat. Hist. of New York, vii, pp. 367-408.
- 1865 A
[Description of the genus *Elasmognathus*.]
Proc. Acad. Nat. Sci. Phila., 1865, p. 183.
- 1866 A
Prodrome of a monograph of the *Pinnipedes*.
Communications of the Essex Institute, v, pp. 3-13.
- 1871 A
On the relations of the orders of mammals.
Proc. Amer. Assoc. Adv. Sci., 19th meeting, Troy, 1870, pp. 267-270.

Gill, Theodore—Continued. 1871 B
Synopsis of the primary subdivisions
of the cetaceans.

Communications of the Essex Institute, vi,
pp. 121-126.

1872 A

On the characteristics of the primary
groups of the class of mammals.

Proc. Amer. Assoc. Adv. Sci., 20th meeting,
Indianapolis, 1871, pp. 284-306.

See also Amer. Naturalist, v, pp. 526-533.

1872 B

Arrangement of the families of mam-
mals and synoptical tables of characters
of the subdivisions of mammals.

Smithsonian Miscel. Coll., No. 230, pp. i-vi,
1-98.

1872 C

Arrangement of the families of fishes,
or classes *Pisces*, *Marsipobranchii*, and
Leptocardii.

Smithsonian Miscel. Coll., No. 247, 1872, pp.
i-xlvi; 1-49.

1873 A

On the affinities of the sirenians.

Proc. Acad. Nat. Sci. Phila., 1873, pp. 262-273.

1873 B

On the homologies of the shoulder-
girdle of the dipnoans and other fishes.

Ann. and Mag. Nat. Hist. (4), xi, pp. 173-178.

Extracted from "Arrangement of the fam-
ilies of fishes."

1873 C

On the genetic relations of the ceta-
ceans and the methods involved in dis-
covery.

Amer. Naturalist, vii, pp. 19-29.

A statement of the author's views regarding
the higher groups and their relations. A re-
ply to Dr. Brandt, of St. Petersburg.

1873 D

On the limits of the class of fishes.

Amer. Naturalist, vii, pp. 71-79.

1875 A

Synopsis of Insectivorous mammals.

Bull. U. S. Geol. and Geog. Surv. Terr., i,
(2), Bull. No. 2, pp. 91-120.

1883 A

Nomenclature of the Xiphiids.

Proc. U. S. Nat. Mus., v, pp. 485-486.

1883 B

On the classification of the Insectivor-
ous mammals.

Bull. Philos. Soc. Washington, v, pp. 118-
120.

1883 C

Note on the affinities of the Ephip-
piids.

Proc. U. S. Nat. Mus., v, pp. 557-560.

Gill, Theodore—Continued. 1884 A
The relations of *Didymodus*, or *Di-
plodus*.

Science, iii, pp. 429-430.

1884 B

The oldest living type of vertebrate,
Chlamydosclachus.

Science, iii, p. 346.

Contains a classification of the sharks.

1884 C

The oldest living type of vertebrates.

Science, iv, p. 524.

1884 D

Synopsis of the plectognath fishes.

Proc. U. S. Nat. Mus., vii, pp. 411-427.

1888 A

Eutheria and *Prototheria*.

Amer. Naturalist, xxii, pp. 258-259.

Shows that the sense in which Dr. Gill
originally used the above terms is not the
same as that in which they were used by Pro-
fessor Huxley.

1889 A

On the classification of the mail-
cheeked fishes.

Proc. U. S. Nat. Mus., xi, pp. 567-592.

This paper deals with the anatomy and
classification of the mail-cheeked fishes, and
contains explanations of various anatomical
terms; also references to the literature bearing
on the group.

1891 A

On the relations of *Cyclopteroidea*.

Proc. U. S. Nat. Mus., xiii, pp. 361-376, with
pls. xxviii-xxx.

1893 A

Families and subfamilies of fishes.

Mem. Nat. Acad. Sci., vi, pp. 125-138.

1894 A

The nomenclature of the *Myliobatidæ*,
or *Aëtobatidæ*.

Proc. U. S. Nat. Mus., xvii, pp. 111-114.

1894 B

The nomenclature of the family
Pæciliidæ, or *Cyprinodontidæ*.

Proc. U. S. Nat. Mus., xvii, pp. 115-116.

1894 C

The differential characters of the
Salmonidæ and *Thymallidæ*.

Proc. U. S. Nat. Mus., xvii, pp. 117-122.

1895 A

Notes on the nomenclature of *Scym-
nus*, or *Scymnorhinus*, a genus of sharks.

Proc. U. S. Nat. Mus., xviii, pp. 191-193.

Scymnus preoccupied in entomology and to
be replaced by *Scymnorhinus*.

- Gill, Theodore**—Continued. 1896 A
Notes on the synonymy of the *Torpedinidæ*, or *Narcobatidæ*.
Proc. U. S. Nat. Mus., xviii, pp. 161-165.
- 1896 B
Note on the nomenclature of the
Pæcilioid fishes.
Proc. U. S. Nat. Mus., xviii, pp. 221-224.
- 1896 C
Fishes, living and fossil.
Science (2), iii, pp. 909-917.
A review of Dr. Bashford Dean's book,
"Fishes, living and fossil."
- 1900 A
The earliest use of the names *Sauria*
and *Batrachia*.
Science (2), xii, p. 730.
- Gill, T., and Coues, E.** 1877 A
Material for a bibliography of North
American mammals.
Report U. S. Geol. Surv. Terr., F. V. Hayden,
xi, appendix B, pp. 951-1081.
This bibliography contains about 3,000 titles
of works on the mammals of North America.
- Gilpin, Bernard.** 1873 A
Observations on some fossil bones
found in New Brunswick, Dominion of
Canada.
Nova Scotia Inst. of Nat. Sci., iii, pp. 400-
404.
Records finding of cetacean bones, sup-
posed to belong to *Beluga vermontana*.
- Goddard, —.** 1841 A
Examination of so-called *Missourium*
kokii.
Proc. Acad. Nat. Sci. Phila., i, pp. 115-116.
- Godman, J. D.** 1825 A
Description of the os hyoides of the
mastodon.
Jour. Acad. Nat. Sci. Phila., iv, pp. 67-72,
with pl. ii.
- 1828 A
American natural history.
Vols. i-iii, Philadelphia. 8vo.
Vol. i was published 1825; ii, 1826; iii, 1828.
This work contains descriptions and figures of
some of the earlier known American fossil
vertebrates.
- 1830 A
Description of a new genus and new
species of extinct mammiferous quad-
ruped.
Trans. Amer. Philos. Soc. (2), iii, pp. 478-485,
pls. xvii, xviii.
Description and figures of *Tetracaulodon*
mastodontoides, Godm.
- Göldi, Emil A.** 1883 A
Kopfskelet und Schultergürtel von
Loricaria cataphracta, *Balistes capriscus*,
und *Accipenser ruthenus*.
Zoolog. Anzeiger, vi, pp. 420-422.
- 1884 A
Kopfskelet und Schultergürtel von
Loricaria cataphracta, *Balistes capriscus*,
und *Accipenser ruthenus*.
Jenaische Zeitschr., xvii (x), pp. 401-451,
with pls. iv-vi.
- Goeppert, Ernst.** 1895 A
Untersuchungen zur Morphologie der
Fischripen.
Morphologisches Jahrbuch, xxiii, pp. 145-
217, with pls. xiii-xvi and 21 figs. in text.
Contains a list of papers on the subject.
- 1895 B
Zur Kenntniss der Amphibienrippen.
Morpholog. Jahrbuch, xxii, pp. 441-448, with
5 figs. in text.
- 1896 A
Die Morphologie der Amphibienrip-
pen.
Festschrift zum 70sten Geburtstage von Carl
Gegenbaur, i, pp. 395-436, with pls. i, ii, and 10
figs. in the text.
Appended is a list of the works of other
writers on the subject.
- Goethe, Johann Wolfgang.** 1831 A
Ueber den Zwischenkiefer des Men-
schen und der Thiere.
Nov. Act. Acad. Caes. Leop.-Carol., xv, pp.
3-48, with pls. i-v.
- Goette, Alex.** 1878 A
Beiträge zur vergleichenden Morpho-
logie des Skeletsystems der Wirbel-
thiere. II Die Wirbelsäule und ihre
Anhänge.
Archiv Mikroskop. Anatomie, xv, pp. 442-
541; pls. xxviii-xxxiii.
Treats of the structure and homologies of
the elements of the vertebral column and
homology of ribs, etc., of Ganoids and Elasmobranchs.
- 1899 A
Ueber die Entwicklung des knöchernen
Rückenschildes (Carapax) der
Schildkröten.
Zeitschr. wissensch. Zoologie, lxvi, pp. 407-
434, with pls. xxvii-xxix.
- Goldfuss, August.** 1845 A
Der Schädelbau des *Mosasaurus*, durch
Beschreibung einer neuen Art dieser
Gattung erläutert.
Nov. Act. Acad. Caes. Leop.-Carol. Nat.
Curiosorum, xxi, pp. 173-200, with pls. vi-ix.
Abstract appeared in Neues Jahrb. Min.,
1847, pp. 122-125.

Goldfuss, August—Continued. 1847 A
Beiträge zur vorweltlichen Fauna des
Steinkohlengebirges.

Herausgegeben von dem naturhistorischen
Vereine für die preussischen Rheinlande,
Bonn, 1847, pp. 1-28, with pls. i-v.

— 1849 A
Description of the *Orthacanthus*
dechenii.

Quart. Jour. Geol. Soc., v, pp. 21-23, of
translations and notices.

From "Beiträge zur vorweltlichen Fauna
des Steinkohlengebirges."

Goode, G. Brown. 1882 A
The taxonomic relations and geo-
graphical distribution of the members
of the swordfish family.

Proc. U. S. Nat. Mus., iv, pp. 415-433.

Goodrich, E. S. 1894 A
On the fossil *Mammalia* from the
Stonesfield slate.

Quart. Jour. Mic. Sci., xxxv, pp. 407-432,
with pl. xxvi.

Pp. 425-429 contain a discussion of the
primitive mammalian molar.

Gorski, Constantin. 1858 A
Einige Bemerkungen über die
Beckenknochen der beschuppten Am-
phibien.

Archiv f. Anat., Physiol. u. wissensch. Medi-
cin., Jahrg. 1858, pp. 382-389.

Grabbe, A. 1884 A
Beitrag zur Kenntniss der Schild-
kröten des deutschen Wealden.

Zeitschr. deutsch. geol. Gesellsch., xxxvi,
pp. 17-28, with pl. i.

Discusses structure and relations of *Pleuro-*
sternon.

Grant, E. 1842 A
On the structure and history of the
mastodontoid animals of North Amer-
ica.

Proc. Geol. Soc. Lond. iii, pp. 770-771.

Grassi, B. 1883 A
Beiträge zur näheren Kenntniss der
Entwicklung der Wirbelsäule der Tele-
ostier.

Morpholog. Jahrbuch, viii, pp. 457-473.

Gratacap, L. P. 1886 A
Fish remains and tracks in the Trias-
sic rocks at Weehawken, N. J.

Amer. Naturalist, xx, pp. 243-246, with pls.
xii and xiii, and 2 woodcuts in the text.

— 1896 A

Fossils and fossilization.

Amer. Naturalist, xxx, pp. 902-912, 993-1003.

Grateloup, J. P. S. 1840 A

Beschreibung eines fossilen Stückes
Kinnlade eines riesigen Saurier-Ge-
schlechtes *Squalodon*, mit *Iguanodon*
verwandt, aus dem Meeres-Sande
von Léognan bei Bordeaux, pp. 8, 1 pl.

Neues Jahrbuch f. Min., 1841, pp. 830-832.

Abstract from Actes Acad. Roy. Sci. Bor-
deaux, 1840, p. 208. For original, see same vol-
ume Jahrbuch, pp. 567-568, a note from Grate-
loup, in which he recognizes the Delphinoid
nature of this fossil. I have seen only the
abstract here referred to.

Gratiolet, Pierre. 1858 A

Note sur un fragment de crâne trouvé
à Montrouge, près Paris.

Bull. Soc. Géol. de France (2), pp. 620-625,
with pl. v.

Describes *Odobenotherium tarteticum*.

Gray, Asa. 1846 A

Food of the mastodon.

Proc. Bost. Soc. Nat. Hist., ii, pp. 92-93.

Reprinted in Amer. Jour. Sci. (2), iii, p. 436.

Gray, J. E. 1837 A

General arrangement of the *Reptilia*.

Proc. Zool. Soc. Lond., 1837, v, pp. 131-132.

— 1857 A
Observations on the species of the
genus *Manatus*.

Proc. Zool. Soc. Lond., 1857, xxv, pp. 59-61.

— 1865 A
Revision of the genera and species
of *Mustelidæ* contained in the British
Museum.

Proc. Zool. Soc. Lond., 1865, pp. 100-154, with
pl. vii, and 3 text figs.

— 1866 A
Catalogue of seals and whales in the
British Museum.

Second edition, pp. 402, with 101 woodcuts
in text.

— 1867 A
Notice of a new species of American
tapir, with observations on the skulls
of *Tapirus*, *Rhinocærus*, and *Elasmo-*
gnathus in the collections of the British
Museum.

Proc. Zool. Soc. Lond., 1867, pp. 876-886, with
pl. xlii, and 6 text figs.

— 1867 B
Observations on the preserved speci-
mens and skeletons of the *Rhinocerotidæ*
in the collection of the British Museum
and Royal College of Surgeons, includ-
ing the descriptions of 3 new species.

Proc. Zool. Soc. Lond., 1865, pp. 1003-1032,
with 6 text figs.

- Gray, J. E.**—Continued. 1868 A
Synopsis of the pigs (*Suidæ*) in the British Museum.
Proc. Zool. Soc. Lond., 1868, pp. 17-49.
- 1868 B
Notes on the skulls of the species of dogs, wolves, and foxes (*Canidæ*) in the collection of the British Museum.
Proc. Zool. Soc. Lond., 1868, pp. 492-525, with 7 woodcuts in the text.
- 1869 A
Catalogue of carnivorous, pachydermatous, and edentate *Mammalia* in the British Museum.
Pp. 398, with 47 woodcuts. London, 1869.
- 1869 B
Notes on the families and genera of of tortoises (*Testudinata*), and on the characters afforded by the study of their skulls.
Proc. Zool. Soc. Lond., 1869, pp. 165-225, with pl. xv, and 20 figs. in the text.
- 1869 C
On the bony dorsal shield of the male *Tragulus kanchil*.
Proc. Zool. Soc. Lond., 1869, p. 226, with 1 fig.
- 1872 A
Description of the younger skull of Steller's sea bear (*Eumetopias stelleri*).
Proc. Zool. Soc. Lond., 1872, pp. 737-743, with 5 figs.
- 1873 A
Notes on the mud tortoises (*Trionyx*, Geoffroy) and on the skulls of the different kinds.
Proc. Zool. Soc. Lond., 1873, pp. 38-72, with pl. viii and 13 text figs.
This paper presents a classification of the *Trionychia*, together with definitions of the genera adopted.
- 1873 B
Notes on the genera of turtles (*Oiacopodes*), and especially on their skeletons and skulls.
Proc. Zool. Soc. Lond., 1873, pp. 395-411, with 3 figs. in the text.
In this paper is presented a classification of the *Chelonidæ* and the *Dermochelyidæ*, together with definitions of the genera.
- 1873 C
On the skulls and alveolar surfaces of land tortoises (*Testudinata*).
Proc. Zool. Soc. Lond., 1873, pp. 722-728, with pl. lx.
- Green, Jacob.** 1821 A
Some curious facts respecting the bones of the rattlesnake.
Amer. Jour. Sci. (1), iii, pp. 85-86.
- Greene, Francis V.** 1853 A
Chemical investigation of remains of fossil *Mammalia*.
Amer. Jour. Sci. (2), xvi, pp. 16-20.
See also Proc. Acad. Nat. Sci. Phila., vi, pp. 292-296.
- Grinnell, G. B.** 1881 A
Monograph by Professor Marsh on the *Odontornithes*, or toothed birds of North America.
Amer. Jour. Sci. (3), xxi, pp. 255-276, with 9 figs. in the text.
- Grinnell, G. B., and Dana, E. S.** 1876 A
On a new Tertiary lake basin.
Amer. Jour. Sci. (3), xi, pp. 126-128.
- Gruber, W.** 1859 A
Monographie des canalis supracondyloidei humeri und des processus supracondyloidei humeri et femoris der Säugethiere und des Menschen.
Mém. l'Acad. Imp. Sci. St. Pétersbourg, viii, pp. 53-128, with pls. i-iii.
- Günther, Albert C.** 1859 A
Catalogue of the Acanthopterygian fishes in the collection of the British Museum.
Vol. i, pp. i-xxxix; 1-524, containing families *Gasterosteidæ*, *Berycidæ*, *Percidæ*, *Aphredoderidæ*. London, 1859.
- 1860 A
Catalogue of the Acanthopterygian fishes in the collection of the British Museum.
Vol. ii, pp. i-xxi, 1-548.
This volume contains the *Squamipinnes*, *Triglidae*, *Sciaenidae*, *Sphyrenidae*, *Scombridae*, *Carangidae*, *Xiphiidae*, etc.
- 1861 A
Catalogue of the Acanthopterygian fishes in the collection of the British Museum.
Vol. iii, pp. i-xxv, 1-586.
- 1862 A
Catalogue of the fishes in the British Museum. Vol. iv, containing *Pomacentridæ*, *Labridæ*, etc.
Pp. i-xxii; 1-534.
- 1864 A
Catalogue of the fishes of the British Museum. Vol. v, containing the families *Siluridae*, *Characinidae*, etc.
Pp. i-xxii, 1-455, London, 1864.

Günther, Albert C.—Continued. 1866 A
Catalogue of the fishes of the British Museum. Vol. vi, containing the families *Salmonidæ*, *Percopsidæ*, *Galaridæ*, *Mormyridæ*, *Gymnarchidæ*, *Esocidæ*, *Umbriidæ*, *Scombresocidæ* *Cyprinodontidæ*.
Pp. i-xv, 1-368, London, 1866.

1867 A
Contribution to the anatomy of *Hateria* (*Rhynchocephalus* Owen).
Philos. Trans. Roy. Soc., London, clvii, pp. 595-629, with pls. xxvi-xxviii.

1868 A
Catalogue of the fishes of the British Museum.
Vol. vii, pp. i-xx, 1-512.
Contains families of the *Physostomi*.

1870 A
Catalogue of the fishes of the British Museum.
Vol. viii, pp. i-xxv, 1-549.
This volume contains the families *Gymnotidæ*, *Symbranchidæ*, *Muraenidæ*, *Pegasidæ*; also the *Lophobranchii*, *Plectognathi*, *Dipnoi*, *Ganoidei*, *Chondropterygii*, *Cyclostomata*, and the *Leptocardii*.

1871 A
The new ganoid fish (*Ceratodus*) recently discovered in Queensland.
Nature, iv, pp. 406-408, 428-429.

1871 B
Ceratodus and its place in the system.
Ann. and Mag. Nat. Hist. (4), vii, pp. 222-227.

1872 A
Description of *Ceratodus*, a genus of Ganoid fishes recently discovered in rivers of Queensland, Australia.
Philosoph. Trans. Royal. Soc. Lond., clxi, pp. 511-571; pls. xxx-xlii.

1877 A
The gigantic land tortoises (living and extinct) in the collection of the British Museum.
Pp. 96; pls. 54. London, 1877.

1880 A
An introduction to the study of fishes.
Edinburgh, 1880, 8vo, pp. i-xvi; 1-720, with 321 figs. in the text.

1881 A
Ichthyology.
Encyclop. Brit., 9th ed., xii, pp. 630-695, with 70 figs. in the text.

Günther, Albert C.—Continued. 1886 A
Reptiles.
Encyclop. Brit., 9th ed., xx, pp. 432-445, 465-473.

Dr. Günther's portion of the article on *Reptilia* treats of the history and literature of the subject, the various systems of classification, the general characters of the class, and the geological and geographical distribution. There are also lists of the most important works on the subject.

1888 A
Tortoise.
Encyclop. Brit., 9th ed., xxiii, pp. 455-460, with 9 figs. in the text.
A popular account of tortoises and a scheme of classification.

Gürich, Georg. 1891 A
Ueber Placodermen und andere devonische Fischreste im Breslauer mineralogischen Museum.
Zeitschr. deutsch. geol. Gesellsch., xliii, pp. 902-911, with 5 figs. in the text.

1891 B
Ueber einen neuen *Nothosaurus* von Gogolin in Oberschlesien.
Zeitschr. deutsch. geol. Gesellsch., xliii, pp. 967-970, with 2 figs. in the text.

Haacke, Wilhelm. 1888 A
Ueber die Entstehung des Säugetieres.
Biolog. Centralbl., viii, pp. 8-16.

1893 A
Ueber die Entstehung des Säugetieres.
Biolog. Centralbl., xiii, pp. 719-732.

Haberlandt, G. 1876 A
Ueber *Testudo præceps* n. sp., die erste fossile Landschildkröte des Wiener Beckens.
Jahrbuch k.-k. geol. Reichsanstalt, xxvi, pp. 243-248, with pl. xvi.
Makes comparisons with Dr. Leidy's *T. culbertsonii*.

Habersham, Joseph.
See note under **Hodson, W. B.** 1846 A.

Haddon, A. C.
See **Bridge** and **Haddon**.

Haeckel, Ernst. 1895 A
Systematische Phylogenie der Wirbelthiere (*Vertebrata*). Dritter Theil des Entwurfs einer systematischen Phylogenie.
8vo; Berlin, 1895; pp. i-x; 1-660.

- Hale, C. S.** 1848 A
Geology of south Alabama.
Amer. Jour. Sci. (2), vi., pp. 354-363.
- Hall, J.** 1843 A
Geology of New York. Part iv, comprising the survey of the 4th geological district.
Pp. i-xxv; 1-687, with tables containing 74 figs. of organic remains and 19 pls. 4to. Albany, 1843.
- 1846 A
On the geological relations of *Castoroides ohioensis*.
Proc. Bost. Soc. Nat. Hist., ii, pp. 167-168.
Describes skull found near Clyde, N. Y.
- 1846 B
Notice of the geological position of the cranium of the *Castoroides ohioensis*.
Jour. Boston Soc. Nat. Hist., v, pp. 385-391.
This paper constitutes a portion of a joint article, by James Hall and Jeffries Wyman, on the skull of *Castoroides*. See Wyman, J., 1846 B.
- 1871 A
Notes and observations on the Cohoes mastodon.
Twenty-first Ann. Report Regents Univ. N. Y.; on condition of State Cabinet, pp. 99-148, with pls. iii-vii.
- 1887 A
Note on the discovery of a skeleton of an elk, *Elaphus canadensis*, in the town of Farmington, Ontario County.
Sixth Ann. Report State Geologist, New York, for 1886, p. 39.
- Hallman, E.** 1837 A
Die vergleichende Osteologie des Schläfersbeins; zur Vereinfachung der herrschenden Ansichten bearbeitet.
Hannover, 1837. Pp. 1-130; pls. i-iv.
- Hallowell, Edward.** 1846 A
Remarks on some bones of a young mastodon.
Proc. Acad. Nat. Sci. Phila., iii, p. 130. See also p. 117.
- Hambach, G.** 1890 A
A preliminary catalogue of the fossils occurring in Missouri.
Geol. Surv. Missouri, Bull. No. 1, pp. 60-85.
This contains, on pp. 80 and 81, an alphabetical list of the species of the fossil fishes found in Missouri, so tabulated as to show their stratigraphical distribution. On p. 82 are recorded four mammals which have been found fossil in the State. Since the list of Missouri fossils prepared by Chas. R. Keyes was published at a later date (1894), but few references are given in the present catalogue to Hambach's list. However, this list contains
- Hambach, G.—Continued.**
a number of species not before reported from Missouri. These are recorded in the present Catalogue.
- Hammerschmidt, Carl E.** 1848 A
Resultate geologischer, anatomischer, und zoologischer Untersuchungen über *Hydrarchos* Koch.
Haidinger's Berichte über die Mittheilungen von Freunden der Naturwissenschaften in Wien, iii, pp. 322-326.
- Hancock, Albany, and Atthey, Thos.** 1868 A
Notes on the remains of some reptiles and fishes from the shales of the Northumberland coal field.
Ann. and Mag. Nat. Hist. (4), i, pp. 266-278, 346-378, with pls. xiv-xvi.
Also in Nat. Hist. Trans. Northumberland and Durham, iii, 1868, pp. 66-120, with pls. i-iii.
- 1868 B
Notes on the various species of *Ctenodus* obtained from the shales of the Northumberland coal field.
Nat. Hist. Trans. Northumberland and Durham, iii, pp. 54-66.
- 1869 A
On a new Labyrinthodont amphibian from the Northumberland coal field, and on the occurrence in the same locality of *Anthracosaurus russelli*.
Nat. Hist. Trans. Northumberland and Durham, iii, pp. 310-319.
- 1869 B
On the generic identity of *Climaxodus* and *Janassa*.
Ann. and Mag. Nat. Hist. (4), iv, pp. 322-328, pl. xii.
Also in Nat. Hist. Trans. Northumberland and Durham, iii, 1869, pp. 330-338.
- 1870 A
Note on an undescribed fossil fish from the Newsham Coal shale, near Newcastle-upon-Tyne.
Ann. and Mag. Nat. Hist. (4), v, pp. 266-268.
Describes as new genus *Archichthys*, now regarded as synonym of *Strepsodus*. The genus *Archichthys* founded on portion of a jaw with teeth.
- 1871 A
A few remarks on *Dipterus* and *Ctenodus*, and on their relationship to *Ceratodus forsteri* Krefft.
Ann. and Mag. Nat. Hist. (4), vii, pp. 190-198, pls. xiii, xiv.
Also in Nat. Hist. Trans. Northumberland and Durham, iv, 1872, pp. 397-407, with pls. xiii, xiv.

Hancock, Albany, and Atthey, Thos.—
Continued. 1872 A

Descriptive note on a nearly entire specimen of *Pleurodus rankinii*, on two new species of *Platysomus*, a new *Amplicentrum*, with remarks on a few other fish remains in the Coal-measures at Newham.

Ann. and Mag. Nat. Hist. (4), ix, pp. 249-262, with pls. xvii, xviii.

Also in Nat. Hist. Trans. Northumberland and Durham, 1872, iv, pp. 408-423, with pls. xv, xvi.

Hancock, Albany, and Howse, Richard.
1870 A

On *Janassa bituminosa* Schlotheim, from the marl slate of Midderidge, Durham.

Ann. and Mag. Nat. Hist. (4), v, pp. 47-62; pls. ii, iii.

Also in Nat. Hist. Trans. Northumberland and Durham, iii, 1869, pp. 339-357, with pls. x, xi.

1872 A

On *Dorypterus hoffmanni* Germar, from the marl slates of Midderidge, Durham.

Nat. Hist. Trans. Northumberland and Durham, iv, pp. 243-268, with pls. ix, x.

Hannover, A. 1868 A

Recherches sur la structure et le développement des écailles et des épines chez les poissons cartilagineux.

Annales Sci. Naturelles, Zool. (5), ix, pp. 373-378.

Harlan, R. 1823 A
Observations on fossil elephant teeth, of North America.

Jour. Acad. Nat. Sci. Phila., iii, pp. 65-67, pl. v.

1824 A

On a new fossil genus of the order *Enalio Sauri* (of Conybeare).

Jour. Acad. Nat. Sci. Phila., iii, pp. 331-337, with pl. xii, figs. 1-5.

In this paper is described the new genus *Saurocephalus*, based on the new species *S. lanciformis*.

1824 B

On an extinct species of crocodile not before described; and some observations on the geology of west Jersey.

Jour. Acad. Nat. Sci. Phila., iv, pp. 15-24, with pl. i.

Describes remains afterwards called *Crocodylus macrorhynchus*.

Harlan, R.—Continued. 1825 A

Fauna Americana; being a description of the mammiferous animals inhabiting North America.

8vo., pp. i-x, 1-318, Philadelphia: Published by Anthony Finley.

1825 B

Notice of the plesiosaurus and other fossil reliquæ from the State of New Jersey.

Jour. Acad. Nat. Sci. Phila., iv, pp. 231-236.

The "plesiosaurus" is *Priscodolophinus harlani* Leidy.

1828 A

Note from R. Harlan, M. D., on the examination of the large bones disinterred at the mouth of the Mississippi River and exhibited in the city of Baltimore, Jan. 22, 1828.

Amer. Jour. Sci., xiv, pp. 186-187.

1831 A

Description of the fossil bones of the *Megalonyx* discovered in "White Cave," Kentucky.

Jour. Acad. Nat. Sci. Phila., vi, pp. 269-288, pls. xii-xiv.

Describes *Megalonyx laqueatus*.

See for notice of this paper Neues Jahrbuch Min., 1836, p. 123. Also Amer. Jour. Sci., 1831, xx, pp. 414-415.

1831 B

Description of the jaws, teeth, and clavicle of the *Megalonyx laqueatus*.

Monthly Amer. Jour. Geology and Nat. Sci., i, pp. 74-76, with pl. iii.

1834 A

On some new species of fossil saurians found in America.

Report Brit. Assoc. Adv. Sci., 3d meeting, Cambridge, 1833, p. 440.

A brief abstract, naming only *Ichthyosaurus missouriensis*.

1834 B

Critical notices of various organic remains hitherto discovered in North America.

Trans. Geol. Soc. of Pennsylvania, i, pt. i, pp. 46-112, Philadelphia, 1834.

See also Harlan, 1835 B; Edinburgh New Philos. Jour., xvii, pp. 342-362, xvii, pp. 28-40; Neues Jahrb. Min., 1836, pp. 99-109.

1834 C

Notice of fossil bones found in the Tertiary formation of the State of Louisiana.

Trans. Amer. Philos. Soc., iv, pp. 397-403, pl. xx, figs. 1, 2.

The bones are assigned to the genus *Basilosaurus*.

Harlan, R.—Continued.

1834 D

Notice of the discovery of the remains of the *Ichthyosaurus* in Missouri, N. A. Trans. Amer. Philos. Soc., iv, pp. 405-409, pl. xxx, figs. 3-8.

Describes *Ichthyosaurus missouriensis*, but a note follows which states that the fossil must be assigned to some new genus. This is not named.

1834 E

Announcement of the finding of *Ichthyosaurus missouriensis* and *Basilosaurus*.

Bull. Soc. Géol. de France (1), iv, p. 124.
No descriptions are furnished.

1835 A

Observations on a large skeleton recently disinterred from the mouth of the Mississippi River.

Med. and Phys. Researches, pp. 76-77.

1835 B

Critical notices of various organic remains hitherto discovered in North America.

Med. and Phys. Researches, pp. 253-313.
See also Harlan, 1834 B.

1835 C

Description of the fossil bones of the *Megalonyx*, recently discovered in the United States, N. A.

Med. and Phys. Researches, pp. 319-336, with pls. xii-xvi.

1835 D

Observations on the fossil bones found in the Tertiary formation in the State of Louisiana.

Med. and Phys. Researches, pp. 337-343.
Treats of *Basilosaurus*.

1835 E

Description of the Ichthyosaurian remains recently discovered in the State of Missouri.

Med. and Phys. Researches, pp. 344-348, with 1 pl. of 6 figs.
Treats of *Ichthyosaurus missouriensis*.

1835 F

Description of the remains of the *Basilosaurus*, a large fossil marine animal recently discovered in the horizontal limestone of Alabama.

Méd. and Phys. Researches, pp. 349-358, with pls. xxvi-xxviii.

1835 G

Observations on the fossil elephant teeth of North America.

Med. and Phys. Researches, pp. 359-361, with 1 pl.

The teeth figured are probably those of *E. primigenius*.

Harlan, R.—Continued.

1835 H

Description of a new fossil genus of the order *Enalio Sauri* (of Conybeare). Med. and Phys. Researches, pp. 362-366, with 1 pl.

1835 I

Description of an extinct species of crocodile not before described, and some observations on the geology of west Jersey.

Med. and Phys. Researches, pp. 369-381, with 1 pl. of *Crocodylus macrorhynchus*.

1835 J

Notice of plesiosaurian and other fossil reliquæ from the State of New Jersey.

Med. and Phys. Researches, pp. 382-385, with 1 pl.

1839 A

Notice of the discovery of the *Basilosaurus* and the *Batrachiosaurus*.

Proc. Geol. Soc. Lond., iii, pp. 23-24.

Also in Lond. and Edinb. Philos. Mag., xiv, p. 302.

No adequate descriptions are given of the genera proposed.

1839 B

[Letter regarding *Basilosaurus* and *Batrachotherium*.]

Bull. Soc. Géol. France, x, pp. 89-90.

See also Neues Jahrb. Min., 1840, p. 741, for abstract.

1839 C

On the discovery of the *Basilosaurus* and the *Batrachiosaurus*.

Lond. and Edinb. Philos. Mag. and Jour. Sci., xiv, p. 302.

See also Ann. Sci. Naturelles (2), xii, p. 221.

1840 A

A letter from Dr. Harlan addressed to the president [of the Geol. Soc., London] on the discovery of the remains of the *Basilosaurus*, or *Zeuglodon*.

Trans. Geol. Soc. Lond. (2), vi, pp. 67-68.

1842 A

Bones of the *Orycterotherium*.

Amer. Jour. Sci., xlii, p. 392.

1842 B

Notice of two new fossil mammals from Brunswick canal, Georgia; with observations on some of the fossil quadrupeds of the United States.

Amer. Jour. Sci., xliii, pp. 141-144; pl. iii.

- Harlan, R.**—Continued. 1842 C
Description of the bones of a fossil animal of the order *Edentata*.
Proc. Amer. Philos. Soc., ii, pp. 109-111.
Describes the new genus and species *Orycterotherium missouriense*.
A notice of this paper was published in Ann. and Mag. Nat. Hist., 1842, x, p. 72.
- 1842 D
Description of a new extinct species of dolphin from Maryland.
Second Bull. of Proc. Nat. Institute, pp. 195-196, with 3 large pls.
Describes *Delphinus calvertensis* Harl.
- 1842 E
[A list of fossil bones from Brunswick canal, presented by J. Hamilton Cooper, Darien, Ga.]
Proc. Acad. Nat. Sci. Phila., 1842, pp. 189-190.
- 1843 A
Remarks on Mr. Owen's letter to the editors on Dr. Harlan's new fossil *Mammalia*.
Amer. Jour. Sci., xlv, pp. 208-211.
- 1843 B
Description of the bones of a new fossil animal of the order *Edentata*.
Amer. Jour. Sci. (1), xlv, pp. 69-80, with pls. i-iii.
Description with figures of *Orycterotherium missouriense*.
- Harpe, Ph. de la.** See **Pictet, Gaudin** and **Harpe**.
- Harrison, J.** See **Howes** and **Harrison**.
- Harrison, R. G.** 1894 A
Ectodermal or mesodermal origin of the bones of Teleosts?
Anatom. Anzeiger, x, pp. 139-143, with 3 figs.
The author denies Klaatsch's view that the bones are of ectodermal origin.
- Hartlaub, Clemens.** 1886 A
Berträge zur Kenntniss der Manatus-Arten.
Zoolog. Jahrbücher, i, pp. 1-112, with pls. i-iv and 13 figs. in the text.
An important work. In the beginning there is found a list of papers and memoirs on the subject.
- Hartmann, R.** 1893 A
Ueber die Feliden-Gattung *Machærodus*.
Sitz.-Ber. Gesellsch. naturforsch. Freunde Berlin, 1893, pp. 88-94.
- Hartt, Ch. Fred.** 1871 A
Discovery of mastodon remains at Motts Corners, near Ithaca, N. Y.
Amer. Naturalist, v, pp. 314-315.
- Hasse, C.** 1876 A
Die fossilen Wirbel.
Morpholog. Jahrbuch, ii, pp. 449-477, with pls. xxx-xxxi.
- 1877 A
Die fossilen Wirbel. Die fossilen *Squatinæ*.
Morpholog. Jahrbuch, iii, pp. 328-351, with pls. xvii-xviii.
- 1878 A
Das natürliche System der Elasmobranchier auf Grundlage des Baues und der Entwicklung der Wirbelsäule.
Zoolog. Anzeiger, i, pp. 144-148; 167-172.
- 1879 A
Das natürliche System der Elasmobranchier auf Grundlage des Baues und der Entwicklung ihrer Wirbelsäule. Eine morphologische und paläontologische Studie. Allgemeiner Theil.
Pp. i-vi; 1-76, with 2 pls. and 6 wood cuts. Jena, 1879.
See for continuation of this work Hasse, C., 1882 A.
- 1879 B
Ueber den Bau und über die Entwicklung des Knorpels bei den Elasmobranchiern.
Zoolog. Anzeiger, ii, pp. 325, 351-355, 371-374.
- 1882 A
Das natürliche System der Elasmobranchier auf Grundlage des Baues und der Entwicklung ihrer Wirbelsäule. Eine morphologische und paläontologische Studie. Besonderer Theil.
Pp. 1-285, with 40 pls. Jena., 1882.
For beginning of this work see Hasse, C. 1879 A. For conclusion, Hasse, C., 1885 A.
- 1885 A
Das natürliche System der Elasmobranchier auf Grundlage des Baues und der Entwicklung ihrer Wirbelsäule. Eine morphologische und paläontologische Studie. Ergänzungsheft.
Pp. 1-27, with 1 pl. Jena, 1885.
For earlier parts of this work see Hasse, C., 1879 A, and Hasse, C., 1882 A.
- 1893 A
Allgemeine Bemerkungen über die Entwicklung und die Stammesgeschichte der Wirbelsäule.
Anatom. Anzeiger, viii, pp. 288-289.
- Haswell, William A.** 1883 A
On the structure of the paired fins of *Ceratodus*, with remarks on the general theory of the vertebrate limb.
Proc. Linnean Soc. N.S. Wales (1), vii, pp. 2-11, with pl. i.

- Haswell, William A.**—Cont'd. 1884 A
Studies on the Elasmobranch skeleton.
Proc. Linnean Soc. N. S. Wales (1), ix, pp. 71-119, with pls. i and ii.
- Hatcher, J. B.** 1893 A
The Ceratops beds of Converse County, Wyo.
Amer. Jour. Sci. (3), xlv, pp. 135-144.
- 1893 B
The Titanotherium beds.
Amer. Naturalist, xxvii, pp. 204-221, with 3 figs. in the text.
- 1894 A
A median-horned rhinoceros from the Loup Fork beds of Nebraska.
Amer. Geologist, xiii, pp. 149-150.
- 1894 B
Discovery of *Diceratherium*, the two-horned rhinoceros, in the White River beds of South Dakota.
Amer. Geologist, xiii, pp. 360-361.
- 1894 C
On a small collection of vertebrate fossils from the Loup Fork beds of northwestern Nebraska; with note on the geology of the region.
Amer. Naturalist, xxviii, pp. 236-248, pls. i, ii.
Describes as new *Aelurodon taxoides* and *A. meandrinus*. Treats also of *Aphelops fossiger* and *Telloceras major*.
Abstract in Princeton Coll. Bull., vi, p. 54, 1894.
- 1895 A
On a new species of *Diplacodon*, with a discussion of the relations of that genus to *Telmatotherium*.
Amer. Naturalist, xxix, pp. 1084-1091, with pls. xxxviii-xxxix, and 2 figs. in the text.
- 1895 B
Discovery, in the Oligocene of South Dakota, of *Eusmilus*, a genus of saber-toothed cats new to North America.
Amer. Naturalist, xxix, pp. 1091-1093.
Description of *Eusmilus dakotensis*.
- 1895 C
The Princeton scientific expedition of 1895.
Princeton Coll. Bull., vii, pp. 95-98.
- 1896 A
Some localities for Laramie mammals and horned dinosaurs.
Amer. Naturalist, xxx, pp. 112-120, with map on pl. iii.
- Hatcher, J. B.**—Continued. 1896 B
Recent and fossil tapirs.
Amer. Jour. Sci. (4), i, pp. 161-180, with pls. ii-v and 2 figs. in the text.
Notice of this paper by M. Schlosser appears in Neues Jahrb. Min. 1899, ii, pp. 314-316.
- 1897 A
Diceratherium proavatum.
Amer. Geologist, xx, pp. 313-316, with pl. ix.
Regarded as distinct from *Aceratherium tri-dactylum*.
- 1900 A
The Carnegie Museum palæontological expeditions of 1900.
Science (2), xii, pp. 718-720.
Records finding of specimen of *Platacodon nanus*, and the determination that it is a fish.
- 1900 B
Vertebral formula of *Diplodocus* (Marsh).
Science (2), xii, pp. 828-830.
- Hawkins, B. W.** 1874 A
On the pelvis of *Hadrosaurus*.
Proc. Acad. Nat. Sci. Phila., 1874, pp. 90-91.
- 1875 A
Pelvis of *Hadrosaurus*.
Proc. Acad. Nat. Sci. Phila., 1875, p. 329.
- Hay, O. P.** 1895 A
On the structure and development of the vertebral column of *Amia*.
Pubs. Field Columb. Mus., Zool., i, pp. 1-54, pls. i-iii.
- 1895 B
On certain portions of the skeleton of *Protostega gigas*.
Pubs. Field Columb. Mus., Zool., i, pp. 57-62, pls. iv, v.
- 1895 C
Description of a new species of *Petalodus* (*P. securiger*), from the Carboniferous of Illinois.
Jour. Geology, iii, pp. 561-564, with 2 figs. in the text.
- 1896 A
On the skeleton of *Toxochelys latiremis*.
Pubs. Field Columb. Mus., Zool., i, pp. 101-106, pls. xiv, xv.
- 1896 B
The structure and mode of development of the vertebral column.
Science (2), iv, pp. 959-960.
- 1898 A
Protospondyli and *Aetheospondyli* of A. S. Woodward.
Science (2), vii, p. 358.

Hay, O. P.—Continued.

1898 B

Observations on the genus of Cretaceous fishes called by Prof. Cope *Porthetus*.

Science (2), vii, p. 646.

Shows that Leidy's *Xiphactinus* is identical with Cope's later published *Porthetus*.

1898 C

Classification of the Amioid and Lepistosteoid fishes.

Amer. Naturalist, xxxii, pp. 341-349.

1898 D

Observations on the genus of fossil fishes called by Professor Cope *Porthetus*, by Dr. Leidy *Xiphactinus*.

Zool. Bulletin, ii, pp. 25-54, with 16 figs. in the text.

1898 E

Notes on species of *Ichthyodectes*, including the new species *I. cruentus*, and on the related and herein established genus *Gillicus*.

Amer. Jour. Sci. (4), vi, pp. 225-232, with 5 figs. in the text.

1898 F

On *Protostega*, the systematic position of *Dermochelys*, and the morphogeny of the chelonian carapace and plastron.

Amer. Naturalist, xxxii, pp. 929-948, with 3 figs. in the text.

1899 A

On the names of certain North American fossil vertebrates.

Science (2), ix, pp. 593-594.

The generic name *Wortmania* is proposed for *Hemiganus otariidens* Cope; *Miolabis* for *Procamelus robustus*; *Homogalax* for *Systemodon primævus*; *Equus eous* for *E. intermedius* Cope.

1899 B

On one little known and one hitherto unknown species of *Saurocephalus*.

Amer. Jour. Sci. (4), vii, pp. 299-304, with 5 figs. in the text.

1899 C

Notes on the nomenclature of some North American fossil vertebrates.

Science (2), x, pp. 253-254.

New generic name proposed, *Adjidaumo*; new specific names, *Canis (?) marshii*, *Cynodictis hylactor*.

1899 D

Descriptions of two new species of tortoises from the tertiary of the United States.

Proc. U. S. Nat. Mus., xxii, pp. 21-24, with pls. iv-vi.

Describes *Hadrianus schucherti* and *Acherontemys heckmani*.

Hay, O. P.—Continued.

1899 E

On some changes in the names, generic and specific, of certain fossil fishes.

Amer. Naturalist, xxxiii, pp. 783-792.

1899 F

A census of the fossil *Vertebrata* of North America.

Science (2), x, pp. 681-684.

This paper purports to give the number of described species and genera belonging to each of the large groups of fossil vertebrates.

1899 G

On the nomenclature of certain American fossil vertebrates.

Amer. Geologist, xxiv, pp. 345-349.

1900 A

Descriptions of some vertebrates of the Carboniferous age.

Proc. Amer. Philos. Soc., xxxix, pp. 96-123, with pl. vii and 3 text figs.

New species described are *Dittodus lucasi*, *Cladodus girtyi*, *Rhizodopsis mazonius*, *Strepsodus arenosus*, *S. dawsoni*, and *Elonichthys peltigerus hypsilepis*.

Hay, Robert.

1885 A

Notes on the fossil jaw of bison from the Pliocene of Norton County.

Trans. Kansas Acad. Sci., ix, p. 98.

Haycraft, John Berry.

1891 A

The development of the carapace of the *Chelonia*.

Trans. Roy. Soc., Edinburgh, xxxvi, pp. 335-342, with pl. xxxvi.

Hayden, F. V.

1858 A

Tertiary basin of White and Niobrara rivers.

Proc. Acad. Nat. Sci. Phila., pp. 147-158.

On pp. 157-158 is found a list of all the fossil Tertiary vertebrates known at that time from that region.

1858 B

Explorations under the War Department. Explanations of a second edition of a geological map of Nebraska and Kansas, based upon information obtained in an expedition to the Black Hills, under command of Lieut G. K. Warren, Top. Engr., U. S. A.

Proc. Acad. Nat. Sci. Phila., 1858, pp. 139-158. Contains order of Tertiary beds and a list of fossil vertebrates.

An abstract of this paper appeared in Amer. Jour. Sci., 1858, xxvi, pp. 404-408.

1866 A

Discovery of a mastodon tooth near Fort Kearney and another opposite St. Louis.

Proc. Acad. Nat. Sci., Phila., p. 316.

Occupies two and a half lines.

- Hayes, Seth.** 1895 A
An examination and description of mastodon and accompanying mammalian remains found near Cincinnati, June, 1894.
Jour. Cincinnati Soc. Nat. Hist., xvii, pp. 217-226.
- Haymond, Rufus.** 1844 A
Notice of remains of *Megatherium*, *Mastodon*, and Silurian fossils.
Amer. Jour. Sci. (1), xlvi, p. 294-296.
A letter to the senior editor.
- Hays, Isaac.** 1830 A
Description of a fragment of the head of a new fossil animal discovered in a marl pit near Moorestown, N. J.
Trans. Amer. Philos. Soc. (2), iii, pp. 471-477, pl. xvi.
Proposal of new genus *Saurodon* with species *S. lanciformis* and *S. leanus* (*leae*).
- 1834 A
Description of specimens of inferior maxillary bones of mastodons in the cabinet of the American Philosophical Society, with remarks on the genus *Tetracaulodon* (Godman), etc.
Trans. Amer. Philos. Soc. (2), iv, pp. 317-339, with pls. xx-xxix.
- 1841 A
[Remarks on collection of bones, mostly of *Mastodon*, exhibited by Dr. Koch.]
Proc. Amer. Phil. Soc., ii, pp. 102-103, 105-106.
- 1842 A
[Review of paper by Prof. Rich. Owen on Koch's collection of mammalian remains, especially of the genus *Tetracaulodon*.]
Proc. Amer. Philos. Soc., ii, pp. 183-184.
- 1842 B
[On the mastodontoid animals in the collection of Mr. Koch.]
Proc. Amer. Phil. Soc., ii, pp. 264-266.
- 1843 A
On the family *Proboscidea*, their general character and relations, their mode of dentition, and geological distribution.
Proc. Amer. Phil. Soc., iii, pp. 44-48.
- 1844 A
[Remarks on bones of "*Tetracaulodon*," mastodon, and elephant.]
Proc. Amer. Philos. Soc., iv, pp. 30-43.
- Hays, Isaac—Continued.** 1846 A
[Remarks in regard to recently discovered mastodons in New York and New Jersey.]
Proc. Amer. Philos. Soc., iv, p. 269.
- 1852 A
[Remarks on tooth of fossil tapir from North Carolina.]
Proc. Acad. Nat. Sci. Phila., vi, p. 53.
- See also **Horner and Hays.**
- Hazeltine, John.** 1835 A
Fossil tooth.
Amer. Jour. Sci., xxvii, pp. 166-168.
Describes a fossil jaw containing teeth which appear to have belonged to a young mastodon. Found in Chautauqua County, N. Y.
- Hébert, Edmund.** 1855 A
Note sur le tibia du *Gastornis parisiensis*.
Comptes rend. Acad. Sci., Paris, xl, pp. 579-582.
- 1855 B
Note sur le fémur du *Gastornis parisiensis*.
Comptes rend. Acad. Sci., Paris, xl, pp. 1214-1217.
- 1855 C
Tableau des fossiles de la craie de Meudon et description de quelques espèces nouvelles.
Mém. Soc. géol. de France, (2), v, pp. 345-374, with pls. xxvii-xxix.
This paper is quoted by A. S. Woodward for 1854.
- 1856 A
Recherches sur la faune des premiers sédiments tertiaires Parisiens (mammifères pachydermes du genre *Coryphodon*).
Ann. Sci. Naturelles (4), Zool., vi, pp. 87-136, with pls. iii, iv.
- Heckel, Joh. Jakob.** 1843 A
Abbildungen und Beschreibungen der Fische Syriens, nebst einer neuen Classification und Charakteristik sämtlicher Gattungen der Cyprinen.
Stuttgart, 1843, pp. 1-258, with pls. i-xxiii.
Pp. 234-244, with pl. xxiii, are devoted to the fossil fishes of the Lebanon. The genera *Pycnosternix* and *Isodus* are characterized.
- 1850 A
Ueber die Wirbelsäule fossilen Ganoiden.
Sitzungsber. k. Akad. Wissensch. Wien., math.-phys. Cl., v, pp. 358-368, with 4 text figs.

- Heckel, Joh. Jakob**—Cont'd. 1854 A
 Ueber den Bau und die Eintheilung der Pycnodonten, nebst kurzer Beschreibung einiger neuen Arten derselben.
 Sitzungsber. k. Akad. Wissensch. Wien., math.-phys. Cl., xii, pp. 433-463.
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- 1856 A
 Beiträge zur Kenntniss der fossilen Fische Oesterreichs.
 Denkschr. k. Akad. Wissensch. Wien, math.-naturw. Cl., xi, pp. 187-274, with pls. i-xv.
 Also issued separately with pp. 1-88.
- Helm, F.** 1891 A
 On the affinities of *Hesperornis*.
 Nature, xliii, p. 368.
- Hemstedt, R.** 1870 A
 Ueber einigen Besonderheiten der Schädelknochen von *Lepus* und über das knöcherne Gehörorgan desselben Genus.
 Archiv f. Anat., Physiol. u. wissenschaft. Med., Jahrg. 1870, pp. 437-453, pl. xi.
- Hensel, Reinhold.** 1859 A
 Ueber einen fossilen Muntjac aus Schlesien.
 Zeitschr. deutsch. geol. Gesellsch. xi, pp. 251-279, with pls. x-xii.
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- 1860 A
 Ueber *Hipparion mediterraneum*.
 Abhandl. k.-p. Akad. Wissensch. Berlin, 1860. pp. 27-121, with pls. i-iv.
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- 1875 A
 Zur Kenntniss der Zahnformel für die Gattung *Sus*.
 Nova Acta k. Leop.-Carol. Akad., xxxvii, No. 5, pp. 1-40, with pl. xxvi.
- Hertwig, O.** 1874 A
 Über Bau und Entwicklung der Placoidschuppen und der Zähne der Selachier.
 Jenaische Zeitschr. Naturwiss. viii, pp. 331-404, with pls. xii-xiii.
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- 1876 A
 Über das Hautskelet der Fische.
 Morpholog. Jahrbuch, ii, pp. 328-395, with pls. xxiii-xxviii.
 Describes the dermal skeleton of the Silurids and of *Acipenseridae*.
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- 1879 A
 Ueber das Hautskelet der Fische.
 Morpholog. Jahrbuch, v, pp. 1-21, with pls. i-iii.
 Describes dermal skeleton of *Lepisosteidae* and *Polypteridae*.
- Hertwig, O.**—Continued. 1881 A
 Ueber das Hautskelet der Fische. III. Das Hautskelet der *Pediculati*, der *Discoboli*, der Gattung *Diana*, der *Centriscidae*, einiger Gattungen aus der Familie der *Triglidae* und der *Plectognathen*.
 Morpholog. Jahrbuch, vii, pp. 1-42, with pls. i-iv.
- Hibbert, Samuel.** 1836 A
 On the fresh-water limestone of Burdiehouse, in the neighborhood of Edinburgh, belonging to the Carboniferous group of rocks, with supplementary notes on other fresh-water limestones.
 Trans. Roy. Soc. Edinburgh, xiii, pp. 169-282, with pls. v-xii.
- Hicks, L. E.** 1873 A
 Discovery of mastodon remains in Ohio.
 Amer. Jour. Sci. (3), v., p. 79.
- Higgins, E. T.** 1867 A
 On the otolites of fish, and their value as a test in verifying recent and fossil species.
 Jour. Linn. Soc. Lond., ix, pp., 157-166.
- Higley, W. K.** 1886 A
 A paper on *Elephas primigenius*.
 Bull. Chicago Acad. Sci., i, No. x, pp. 123-127, with 1 pl.
- Hilgard, Eugene W.** 1860 A
 Report on the geology and agriculture of Mississippi.
 Pp. i-xiii, 1-391.
 Printed by order of the legislature. Contains remarks on a few fossil vertebrates, and on page 389 a list of fossil teeth of fishes, by Dr. Wm. Spillman.
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- 1867 A
 On the Tertiary formations of Mississippi and Alabama.
 Amer. Jour. Sci. (2), xliii, pp. 29-41.
 Contains mention of *Zeuglodon*.
- Hilgendorf, F.** 1866 A
 Ueber das Gebiss der hasenartigen Nager.
 Monatsber. k.-p. Akad. Wissensch. Berlin, 1865 (1866), p. 673.
- Hill, F. C.** 1881 A
 The fossil *Dinocerata* in the E. M. Museum at Princeton, N. J.
 Proc. Amer. Assoc. Adv. Sci., 29th meeting, Boston, 1880, pp. 524-527, with 1 woodcut.
 An abstract of paper read.
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- 1886 A
 On the mounting of fossils.
 Amer. Naturalist, xx, pp. 353-359, with 8 woodcuts.

Hills, R. C. 1880 A
 Note on the occurrence of fossils in the Triassic and Jurassic beds near San Miguel, in Colorado.
 Amer. Jour. Sci., (3), xix, p. 490.

Hitchcock, Charles H. 1855 A
 Impressions (chiefly tracks) on alluvial clay in Hadley, Mass.
 Amer. Jour. Sci., (2), xix, pp. 391-396.

1865 A
 Editorial notes.
 In Edward Hitchcock's Supplement to the Ichnology of New England. (Hitchcock, E., 1858 A).

1866 A
 Description of a new reptilian bird from the Trias of Massachusetts.
 Annals Lyc. Nat. Hist. New York, viii, pp. 301-302.
 Description of tracks of *Tarsodactylus expansus*.

1868 A
 New American fishes from the Devonian.
 Geol. Magazine (1), v, pp. 184-185, with 2 figs. in text.
 Reports discovery of *Dinichthys herzeri* by Dr. Newberry.

1868 B
 New Carboniferous reptiles and fishes from Ohio, Kentucky, and Illinois.
 Geol. Magazine (1), v, pp. 186-187.
 Reports Prof. Newberry's descriptions of fishes as presented before A. A. A. S., 1867.

1869 A
 Note on the supposed fossil foot marks in Kansas.
 Amer. Jour. Sci. (2), xlvii, pp. 132-133.

1871 A
 [Account and complete list of the *Ichnozoa* of the Connecticut Valley.]
 Walling and Gray's Official Typographical Atlas of Massachusetts, pp. xx-xxi.
 This account is part of a description of the geology of Massachusetts, and consists principally of a list of the fossil footmarks. This list is almost identical with the same author's list of 1889 (1889 B), with the exception of species published after 1871. I cite this paper, therefore, only in the cases of species, two or three in number, more particularly mentioned. Few new facts are presented.

1873 A
 Footprints in the rocks.
 Pop. Sci. Monthly, iii, pp. 428-441, with 7 text-figs.

Hitchcock, Charles H.—Cont'd. 1889 A
 [Remarks on A. Wanner's paper on The discovery of fossil tracks in the Triassic of York County, Pa.]
 Proc. Amer. Assoc. Adv. Sci., 37th meeting, Cleveland, 1888, p. 186.

1889 B
 Recent progress in ichnology.
 Proc. Boston Soc. Nat. History, xxiv, pp. 117-127.
 Contains a list of the American Triassic species of *Ichnozoa* and descriptions of new forms. This list is identical with one published by the same author in 1871 (Hitchcock, C. H., 1871 A), with the exception of a few species published after the issue of the latter paper.

Hitchcock, Edward. 1836 A
 Ornithichnology. Description of the footmarks of birds (*Ornithichnites*) on New Red sandstone in Massachusetts.
 Amer. Jour. Sci., xxix, pp. 307-340, with a folded plate of 24 figs.

1837 A
Ornithichnites in Connecticut.
 Amer. Jour. Sci., xxxi, pp. 174-175.

1837 B
 Fossil footsteps in sandstone and graywacke.
 Amer. Jour. Sci., (1), xxxii, pp. 174-176.

1841 A
 Final report on the geology of Massachusetts.
 Vol. ii, pp. 301-331, with pls. xv-li. Northampton, 1841.
 Pp. 458-525 are devoted to the descriptions of fossil fishes and footprints, and these are illustrated on pls. xxix-li.

1843 A
 Description of five new species of fossil footmarks, from the Red Sandstone of the valley of Connecticut River.
 Reports of the 1st, 2d, and 3d meetings of the Assoc. of Amer. Geol. and Naturalists, pp. 254-264, with pl. xi.

1844 A
 Report on ichnolithology, or fossil footmarks, with a description of several new species, and the coprolites of birds, from the valley of the Connecticut River, and of a supposed footmark from the valley of the Hudson River.
 Amer. Jour. Sci., xlvii, pp. 292-322, with pls. iii-iv.
 Abstract in Neues Jahrb. Min., 1845, pp. 753-757.

Hitchcock, Edward—Continued. 1844 B

Rejoinder to the preceding article of Dr. Deane.

Amer. Jour. Sci., xlvii, pp. 390-399.

A reply to Deane, J., 1844 B. See Deane, J., 1844 C.

1845 A

Extract of a letter from Prof. E. Hitchcock, embracing miscellaneous remarks upon fossil footmarks, the Lincolnite, etc., and a letter from Prof. Richard Owen, on the great birds' nests of New Holland.

Amer. Jour. Sci., xlviii, pp. 61-65.

1845 B

An attempt to name, classify, and describe the animals that made the fossil footmarks of New England.

Proc. 6th annual meeting Assoc. Amer. Geologists and Naturalists, New Haven, Conn., April, 1845, pp. 23-25.

In this paper the footmarks formerly described under the general terms *Ornithoidichnites* and *Sauroidichnites* are assigned generic names.

1847 A

Description of two new species of fossil footmarks found in Massachusetts and Connecticut, or of the animals that made them.

Amer. Jour. Sci. (2), iv, pp. 46-57, with 3 text figs.

1848 A

An attempt to discriminate and describe the animals that made the fossil footmarks of the United States, and especially of New England.

Mem. Amer. Acad. Arts and Sci. (2), iii, pp. 129-256, pls. 1-24.

1855 A

Shark remains from the Coal formation of Illinois, and bones and tracks from the Connecticut River sandstone.

Amer. Jour. Sci. (2), xx, pp. 416-417.

1856 A

On a new fossil fish and new fossil footmarks. I. History of the discovery and general character of the jaw of a new family of fossil fishes. II. Description of a new and remarkable species of fossil footmarks from the sandstone of Turner's Falls, in the Connecticut Valley.

Amer. Jour. Sci. (2), xxi, pp. 96-100, with 1 fig. in the text.

Hitchcock, Edward—Continued. 1856 B

Account of the discovery of the fossil jaw of an extinct family of sharks from the Coal formation.

Proc. Amer. Assoc. Adv. Sci., 9th meeting, 1855, Washington, D. C., pp. 229-230.

A description and figure, without genus and species, of *Edestus minor* Newb., found in Parke County, Ind.

1858 A

Ichnology of New England. A report on the sandstone of the Connecticut Valley, especially its fossil footmarks.

Boston, 1858. 4to, 220 pp.; with 60 quarto pls.

1861 A

Remarks upon certain points in ichnology.

Proc. Amer. Assoc. Adv. Sci., 14th meeting, Newport, 1860, pp. 144-156, with 4 figs. in the text.

1863 A

New facts and conclusions respecting the fossil footmarks of the Connecticut Valley.

Amer. Jour. Sci. (2), xxxvi, pp. 46-57.

1863 B

Supplement to the ichnology of New England.

Proc. Amer. Acad. Arts and Sci., vi, pp. 85-92.

In this paper a number of species formerly described is rejected or recorded as doubtful; two species are mentioned as new but not described; notes are given on other species, and there is a general discussion of fossil tracks.

1865 A

Supplement to the ichnology of New England. A report to the government of Massachusetts in 1863.

Boston, 1865. 4to; pp. i-x, 1-96, pls. i-xx.

Edited by his son, C. H. Hitchcock. Appendix A (pp. 39, 40) is entitled "Bones of *Megadactylus polyzelus*;" Appendix B (pp. 40-93) consists of a descriptive catalogue of the Hitchcock ichnological cabinet at Amherst College.

1872 A

Discovery of a tooth of a mastodon in Massachusetts.

Amer. Jour. Sci. (3), iii, p. 146.

1885 A

[Letter to editor of Science announcing discovery of a mastodon's skeleton near Geneva, N. Y.]

Science, vi, p. 40.

Hitchcock, Fanny R. M. 1887 A

On the homologies of *Edestus*.

Amer. Naturalist, xxi, pp. 847-848.

Hitchcock, Fanny R. M.—C't'd. 1888 A
On the homologies of *Edestus*.
Proc. Amer. Assoc. Adv. Sci., 36th meeting,
New York, 1887, pp. 260-261.
Abstract of paper presented.

1888 B
Further notes on the osteology of the
shad (*Alosa sapidissima*).

Annals N. Y. Acad. Sci., iv, pp. 225-228, with
text fig.

Hodson, William B. 1846 A
Memoir on the *Megatherium* and
other extinct gigantic quadrupeds of
the coast of Georgia, with observations
on its geologic features.

Pp. 1-47, with 1 pl. and 2 maps. New York,
1846.

Besides the matter contributed by Hodson
this memoir contains a "Memorandum" by
Dr. Jos. Habersham (pp. 25-30) and "Observa-
tions" by J. Hamilton Couper (pp. 31-47).

Hoernes, R. 1875 A
Vorlage von Wirbelthierresten aus
den Kohlenablagerungen von Trifail
in Steiermark.

Verhandl. k. k. geol. Reichsanstalt, 1875-
1876, pp. 310-313.

1876 A
Anthracotherium magnum Cuv aus
den Kohlenablagerungen von Trifail.
Jahrbuch k. k. geol. Reichsanstalt, xxvi,
pp. 209-242, with pl. xv.

Contains numerous references to the litera-
ture of this subject up to that time.

1877 A
Zur Kenntniss der *Anthracotherium*
dalmatinum Meyer.

Verhandl. k. k. geol. Reichsanstalt, 1875-1876,
No. 15, pp. 363-366.

1892 A
Zur Kenntniss der Milchbezeichnung
der Gattung *Entelodon* Aym.
Sitzungsber. Akad. Wissensch. Wien, ci, pp.
17-24, with 1 pl.

Hoffmann, C. K. 1874 A
Amphibien.
Bronn's Klassen und Ordnungen des Thier-
reichs, vi, pp. 1-88, pls. i-xiv.
This portion of Dr. Hoffmann's work is de-
voted to the osteology of the *Batrachia*. In it
is found a list of 78 works on this subject.

1876 A
Beiträge zur Kenntniss des Beckens
der Amphibien und Reptilien.
Niederländisches Archiv Zoologie, iii, pp.
143-194, pls. x, xl, and 15 woodcuts in the text.

Hoffmann, C. K.—Continued. 1878 A
Beiträge zur Anatomie der Wirbel-
thiere.

Niederländisches Archiv Zoologie, iv, pp.
112-248, pls. ix-xiii.

Discusses the structure of the carpus and
tarsus of reptiles and amphibians, the integu-
ment and dermal skeleton of *Testudinata*,
morphology of ribs, etc.

1879 A
Beiträge zur vergleichenden Anato-
mie der Wirbelthiere. X; Über das
Vorkommen von Halsrippen bei den
Schildkröten; XI, Über das Verhält-
niss des Atlas und des Epistropheus
bei den Schildkröten; XII, Zur Mor-
phologie des Schultergürtels und des
Brustbeins bei Reptilien, Vögeln, Säuge-
thieren und dem Menschen.

Niederländisches Archiv Zoologie, v, pp.
19-114, with pls. ii-ix.

1890 A
Schildkröten.
Bronn's Klassen und Ordnungen des Thier-
reichs, vi, Abtheil. iii, pp. 1-442, with pls.
i-xlvi.

Pp. 1-73 are devoted to the osteology of the
Testudinata. On pp. 1-3 is found a list of the
literature of the subject.

1890 B
Eidechsen und Wassereidechsen
(*Saurii* und *Hydrosauria*).

Bronn's Klassen und Ordnungen, vi, Abth.
iii, pp. 443-1399, with pls. xlix-cvii.

Pp. 443-610 and pls. xlix-xxi are devoted
to the osteology of this group. Pp. 1299-1329
are devoted to the palæontology of the *Reptilia*.

1890 C
Schlangen und Entwicklungsges-
chichte der Reptilien.

Bronn's Klassen und Ordnungen des Thier-
reichs, vi, pt. 3, pp. 1401-2089, with pls. cviii-
clxx.

The description of the skeleton occupies pp.
1420-1448 and pls. cx-cxvi.

Holder, Joseph B. 1883 A
The Atlantic right whales: A contri-
bution embracing an examination of
(1) The exterior characters and osteo-
logy of a cisarctic right whale—male;
(2) The exterior characters of a cisarctic
right whale—female; (3) The osteo-
logy of a cisarctic right whale—sex not
known. To which is added a concise
résumé of historical mention relating
to the present and allied species.

Bulletin Amer. Mus. Nat. Hist., i, pp. 99-138,
with pls. x-xiii.

- Holland, W. J.** 1900 A
The vertebral formula in *Diplodocus* Marsh.
Science (2), xi, pp. 816-818.
- Hollard, Henri.** 1853 A
Monographie de la famille des Balistides.
Ann. Sci. Naturelles (3), Zool., xx, pp. 71-114, with pls. i-iii.
- 1854 A
Monographie des Balistides. Part 2.
Ann. Sci. Naturelles (4), Zool., i, pp. 39-72; 303-339.
This monograph is continued in vol. ii, pp. 321-366, 1854, and in vol. iv, pp. 5-27, 1855.
- 1857 A
Étude sur les Gymnodontes, et en particulier sur leur ostéologie et sur les indications qu'elle peut fournir pour leur classification.
Annales des Sci. Naturelles (4), Zool., viii, pp. 275-328.
- 1860 A
Mémoire sur le squelette des poissons plectognathes étudié au point de vue des caractères qu'il peut fournir pour la classification.
Annales des Sci. Naturelles (4), Zool., xiii, pp. 5-46, pls. ii, iii.
- Hollick, Arthur.** 1894 A
[Remarks on *Spiraxis* Newb.]
Trans. N. Y. Acad. Sci., xiii, pp. 118-119.
- Holmes, F. S.** 1849 A
Notes on the geology of Charleston, S. C.
Amer. Jour. Sci., vii, pp. 187-201.
- 1850 A
[Remarks on paper by R. W. Gibbes concerning fossil *Equus* from Eocene of South Carolina.]
Proc. Amer. Assoc. Adv. Sci., 3d meeting, Charleston, S. C., 1850, pp. 68-69.
Remarks on Gibbes. R. W. 1850 C.
- 1850 B
Observations on the geology of Ashley River, South Carolina.
Proc. Amer. Assoc. Adv. Sci., 3d meeting, Charleston, S. C., 1850, pp. 201-204.
- 1858 A
Remains of domestic animals among post-Pliocene fossils in South Carolina.
16 pp., 8vo, Charleston, 1858.
This paper contains extract from a paper by Dr. Leidy and a letter by Professor Agassiz. In this letter Agassiz expresses the belief that "horses, sheep, bulls, and hogs not distinguishable at present from the domesticated species" existed in America before the advent of white men.
- Holmes, F. S.—Continued.** 1858 B
Remains of domestic animals among post-Pliocene fossils in South Carolina.
Amer. Jour. Sci. (2), xxv, pp. 442-443.
- 1859 A
[Remarks of Prof. F. S. Holmes on fossils from post-Pliocene of South Carolina, including a letter from Prof. L. Agassiz.]
Proc. Acad. Nat. Sci. Phila., 1859, pp. 177-186.
- Holmes, N.** 1857 A
[Remarks on contemporaneity of man and the mastodon.]
Trans. Acad. Sci. St. Louis, i, p. 117.
- Home, Everard.** 1819 A
An account of the fossil skeleton of the *Proteosaurus*.
Philos. Trans. Roy. Soc. Lond., cix, pl. 209-211.
This paper was preceded by others of the same author in the volumes for 1814, 1816, but in these papers no name was applied to the remains.
- 1819 B
Reasons for giving the name *Proteosaurus* to the fossil skeleton which has been described.
Philos. Trans. Roy. Soc. Lond., cix, pp. 212-216, with pl. xv.
- Honeyman, D.** 1874 A
Skeleton of a whale in the Quaternary of New Brunswick.
Amer. Jour. Sci. (3), vii, p. 597.
Supposed to be *Beluga vermontana*.
- 1874 B
On the Quaternary containing the New Brunswick fossil cetacean.
Amer. Jour. Sci. (3), viii, p. 219.
- Hopkins, William.** 1855 A
Brief outline or general description of a remarkable fossil, not known to be described, and by some supposed to be an ichthyodorulite.
Proc. Amer. Assoc. Adv. Sci., 8th meeting, Washington, D. C., 1854, pp. 287-290, with 2 woodcuts.
- Horner, W. E.** 1840 A
Note of the remains of the mastodon, and some other extinct animals collected together in St. Louis, Mo.
Proc. Amer. Philos. Soc., i, pp. 279-282.
This note refers to the collection of Doctor Koch at St. Louis.

- Horner, W. E.**—Continued. 1841 A
Note on the remains of the mastodon, and some other extinct animals collected together in St. Louis, Mo.
Amer. Jour. Sci., xl, pp. 56-59. (Extract from Proc. Amer. Philos. Soc.)
An investigation of Koch's collection.
- 1841 B
Remarks on the dental system of the mastodon, with an account of some lower jaws in Mr. Koch's collection, St. Louis, Mo., where there is a solitary tusk on the right side.
Proc. Amer. Philos. Soc., i, pp. 307-308.
This is an abstract of "Horner, W. E., 1842 A."
- 1841 C
On the dental system of the mastodon.
Proc. Amer. Philos. Soc., ii, pp. 6-7.
A note of correction of the preceding paper.
- 1842 A
Remarks on the dental system of the mastodon, with an account of some lower jaws in Mr. Koch's collection, St. Louis, Mo., where there is a solitary tusk on the right side.
Trans. Amer. Philos. Soc., viii, pp. 53-59.
- Horner, W. E., and Hays, Isaac.** 1842 A
Description of an entire head, and various other bones of the mastodon.
Trans. Amer. Philos. Soc., viii, pp. 37-48, pls. i-iv.
- Hovey, Edmund O.** 1874 A
The largest fossil elephant tooth yet described.
Proc. Amer. Assoc. Adv. Sci., 22d meeting, Portland, 1873, p. 112.
Abstract of paper presented.
- 1900 A
The geological and palæontological collections in the American Museum of Natural History.
Science (2), xii, pp. 757-760.
- Howes, G. B.** 1887 A
On the skeleton and affinities of the paired fins of *Ceratodus*, with observations upon those of *Elasmobranchii*.
Proc. Zool. Soc. Lond., 1887, pp. 3-26, with pls. i-iii.
- 1887 B
Morphology of the mammalian coracoid.
Jour. Anat. Physiol., xxi, pp. 190-198, with pl. viii.
- Howes, G. B.**—Continued. 1890 A
Observations on the pectoral fin skeleton of the living batoid fishes, and of the extinct genus *Squaloraja*, with especial reference to the affinities of the same.
Proc. Zool. Soc. Lond., 1890, pp. 675-688, with 10 figs. in the text.
- 1893 A
On the mammalian pelvis, with especial reference to the young of *Ornithorhynchus anatinus*.
Jour. Anat. and Physiol., xxvii, pp. 543-556, with pl. xxviii.
- 1896 A
On the mammalian hyoid, with especial reference to that of *Lepus*, *Hyrax*, and *Cholepus*.
Jour. Anat. and Physiol., xxx, pp. 513-526, with pl. viii.
- See also **Hancock and Howes.**
- Howes, G. B., and Davies, A. M.** 1888 A
Observations upon the morphology and genesis of supernumerary phalanges, with especial reference to those of the amphibia.
Proc. Zool. Soc., Lond., 1888, pp. 495-511, with pls. xxiv, xxv.
- Howes, G. B., and Harrison, J.** 1893 A
On the skeleton and teeth of the Australian dugong.
Report Brit. Assoc. Adv. Sci., 62d meeting, Edinburgh, 1892, p. 790.
- Howes, G. B., and Ridewood, W.** 1888 A
On the carpus and tarsus of the *Anura*.
Proc. Zool. Soc. Lond., 1888, pp. 411-182, with pls. vii-ix.
- Howes, G. B., and Swinnerton, H. H.** 1900 A
On the development of the skeleton of the Tuatera, *Sphenodon (Hatteria) punctatus*.
Proc. Zool. Soc. Lond., 1900, pp. 516-517.
An abstract of a paper read before the society.
- Howorth, H. H.** 1870 A
The extinction of the mammoth.
Report of the Brit. Assoc. Adv. Sci., 39th meeting, Exeter, 1869, pp. 90-91.
Abstract of paper presented.
- 1881 A
Climate of Siberia in the era of the mammoth.
Amer. Jour. Sci. (3), xxi, p. 148.
Extracts from Howorth's paper in the Geological Magazine for December, 1880.

- Howorth, H. H.**—Continued. 1881 B
The sudden extinction of the mammoth.
Geol. Magazine (2), viii, pp. 309-315.
- 1892 A
Did the mammoth live before, during, or after the deposition of the glacial drift.
Geol. Magazine (3), ix, pp. 250-258; 396-405.
See Jukes-Brown, vol. ix, p. 477.
- 1893 A
The true horizon of the mammoth.
Geol. Magazine (3), x, pp. 20-27; 161-163; 353-355.
- 1894 A
The mammoth age was contemporary with the age of great glaciers.
Geol. Magazine (4), i, pp. 161-167.
- Hoy, P. R.** 1871 A
Dr. Koch's *Missourium*.
Amer. Naturalist, v, pp. 147-148.
- Hubrecht, A. A. W.** 1877 A
Beitrag zur Kenntniss des Kopf-skelets der Holocephalen.
Niederländisches Archiv für Zoologie, iii, pp. 255-276, with pl. xvii.
See also Morphologisches Jahrbuch, iii.
- 1878 A
Pisces: Fische.
Bronn's Klassen und Ordnungen, vi, Abth. i, pp. 1-86, with pls. i-xii.
Of this work, pp. 1-48, pls. i-vii, appeared in 1876; pp. 49-80, pls. viii-x, in 1878; pp. 81-86, in 1885. Pp. 21-86 are devoted to a consideration of the anatomy of the elasmobranchs.
- 1896 A
Die Keimblase von *Tarsius*, ein Hilfsmittel zur schärferen Definition gewisser Säugethierordnungen.
Festschrift zum 70sten Geburtstage von Carl Gegenbaur, ii, pp. 149-178, with pl. i, and 15 figs. in the text.
Compares *Tarsius* with *Anaptomorphus*.
- Huene, Friedrich v.** 1900 A
Devonische Fischreste aus der Eifel.
Neues Jahrb. Min., Geol. und Pal., 1900, i, Abhandl., pp. 64-66, with 2 text figs.
Records finding of *Dinichthys* and *Rhynchodus*.
- Hulke, J. W.** 1879 A
Note (3d) on (*Eucamerotus* Hulke) *Ornithopsis* H. G. Seeley=*Bothriospondylus* Owen=*Chondrosteosaurus magnus* Owen.
Quart. Jour. Geol. Soc., xxxv, pp. 752-762, with 4 text figs.
- Hulke, J. W.**—Continued. 1879 B
Note on *Poikilopleuron bucklandi* of Eudes Deslongchamps (père) identifying it with *Megalosaurus bucklandi*.
Quart. Jour. Geol. Soc. Lond., xxxv, pp. 233-238, with pl. xii.
- 1880 A
Supplementary note on the vertebrae of *Ornithopsis*, Seeley=*Eucamerotus*, Hulke.
Quart. Jour. Geol. Soc., xxxvi, pp. 31-34, with pls. iii, iv.
- 1882 A
Note on the os pubis and ischium of *Ornithopsis eucamerotus*.
Quart. Jour. Geol. Soc., xxxviii, pp. 372-376, with pl. xiv.
- 1883 A
The anniversary address of the President.
Quart. Jour. Geol. Soc., xxxix, Proceedings, pp. 38-65, with 18 figs. in the text.
Discusses the structure of various extinct reptiles, *Enaliosauria* and *Dinosauria*, especially the structure of shoulder girdle and limbs.
- 1883 B
An attempt at a complete osteology of *Hypsilophodon foxii*.
Philosoph. Trans. Roy. Soc. London, clxxiii, pp. 1035-1062, pls. lxxi-lxxxii.
- 1884 A
The anniversary address of the President [of the Geol. Soc. Lond.].
Quart. Jour. Geol. Soc., vol. xl, Proceedings, pp. 37-57, with 8 text figs.
Discusses structure of certain *Dinosauria*, especially *Iguanodon*.
- 1885 A
Note on the sternal apparatus in *Iguanodon*.
Quart. Jour. Geol. Soc., xli, pp. 473-475, with pl. xiv.
- 1888 A
Contribution to the skeletal anatomy of the *Mesosuchia*, based on fossil remains from the clays near Peterborough in the collection of A. Leeds, esq.
Proc. Zool. Soc. Lond., 1888, pp. 417-442, with pls. xviii, xix.
- 1892 A
On the shoulder girdle in *Ichthyosaurus* and *Sauropterygia*.
Proc. Roy. Soc. London, lii, pp. 233-255, with 9 figs. in the text.
- Humbert, Alois.** See **Pictet** and **Humbert**.

- Humphry, G. M.** 1866 A
On the homologies of the lower jaw, and the bones connecting it with the skull in birds, reptiles, and fishes.
Report Brit. Assoc. Adv. Sci., 35th meeting, Birmingham, 1865, pp. 87-89.
- 1870 A
On the homological relations to one another of the mesial and lateral fins of osseous fishes.
Jour. Anat. and Physiol., v, pp. 58-66, pl. ii.
- Humphreys, John.** 1889 A
The suppression and specialization of teeth.
Proc. Birmingham Philos. Soc., vi, pp. 137-161.
See also **Windle and Humphreys.**
- Hunt, J. G.** 1874 A
[Report on food of the mastodon.]
Proc. Boston Soc. Nat. Hist., xvii, pp. 91-92.
- Hunter, William.** 1769 A
Observations on the bones, commonly supposed to be elephant's bones, which have been found near the river Ohio, in America.
Philos. Trans. Roy. Soc. Lond., 1768, lviii, pp. 34-45, with pl. iv.
- Hurst, C. Herbert.** 1893 A
The digits in a bird's wing: a study of the origin and multiplication of errors.
Natural Science, iii, pp. 275-281, with photographic reproduction of wing of *Archæopteryx*.
- 1895 A
The structure and habits of *Archæopteryx*.
Natural Science, vi, pp. 112-122; 180-186; 244-248, with 2 pls. and 2 figs. in the text.
- Hutchinson, H. N.** 1893 A
Extinct monsters. A popular account of some of the larger forms of ancient animal life, with illustrations by J. Smit and others.
Pp. i-xxii, 1-270, with pls. i-xxvi and 58 text figs.
Reviewed in *Natural Science*, ii, pp. 135-143.
- Huxley, Thomas H.** 1858 A
On *Cephalaspis* and *Pteraspis*.
Quart. Jour. Geol. Soc. Lond., xiv, pp. 267-280, with pls. xiv, xv, showing the microscopical structure of the skeleton.
- 1858 B
On a new species of *Plesiosaurus* from Street, near Glastonbury, with remarks on the structure of the atlas and axis
- Huxley, Thomas H.—Cont'd.**
vertebræ and of the cranium in that genus.
Quart. Jour. Geol. Soc. Lond., xiv, pp. 281-294.
- 1858 C
Observations on the development of some parts of the skeleton of fishes.
1. On the development of the tail in Teleostean fishes.
2. On the development of the palatopterygoid arc and hyomandibular suspensorium in fishes.
Quart. Jour. Micros. Sci., vii, pp. 33-46.
- 1859 A
Observations on the genus *Pteraspis*.
Report Brit. Assoc. Adv. Sci., 28th meeting, Leeds, 1858, pp. 82-83.
- 1859 B
On the dermal armour of *Jacare* and *Caiman*, with notes on the specific and generic characters of recent *Crocodylia*.
Jour. Linn. Soc. Lond., iv, pp. 1-28.
- 1859 C
On a new species of *Dicynodon* (*D. murrayi*) from near Colesberg, South Africa, and on the structure of the skull in the Dicynodonts.
Quart. Jour. Geol. Soc. Lond., xv, pp. 649-658, with pls. xxii, xxiii.
- 1861 A
On *Pteraspis dunensis* (*Archæoteuthis dunensis*, Roemer).
Quart. Jour. Geol. Soc. Lond., xvii, pp. 163-166, with 2 figs. in the text.
- 1861 B
Preliminary essay upon the systematic arrangement of the fishes of the Devonian epoch.
Mem. Geol. Surv. United Kingdom, decade 10, pp. 1-40; pls. 1-3.
- 1861 C
Phaneropleuron andersoni.
Mem. Geol. Surv. United Kingdom, decade 10, pp. 47-49; pl. iii.
- 1863 A
Description of *Anthracosaurus russelli*, a new labyrinthodont from the Lanarkshire coal field.
Quart. Jour. Geol. Soc. Lond., xix, pp. 56-68.
- 1864 A
On the cetacean fossils termed "Ziph-ius," by Cuvier, with a notice of a new species (*Belemnoziphius compressus*) from the Red Crag.
Quart. Jour. Geol. Soc. Lond., xx, pp. 388-396, with pl. xix.

Huxley, Thomas H.—Cont'd. 1865 A

On the osteology of *Glyptodon*.

Philosoph. Trans. Roy. Soc. Lond., clv, pp. 31-70; pls. 4-9.

1866 A

Illustrations of the structure of the Crossopterygian ganoids.

Mem. Geol. Surv. United Kingd., decade 12, pp. 3-45, with pls. ii-x.

1867 A

On the classification of birds.

Proc. Zool. Soc. Lond., 1867, pp. 415-472, with 36 figs. in the text.

1867 B

Description of vertebrate remains from the Jarrow colliery, part i.

Trans. Roy. Irish Acad., xxiv, pp. 353-369, with pls. xix-xxiii.

1868 A

On the animals which are most nearly intermediate between birds and reptiles.

Proc. Roy. Soc. Lond., xvi, pp. 243-248.

Also in Ann. Mag. Nat. Hist. (4), i, 1868, pp. 220-224; Geol. Mag. (1), v, pp. 357-365.

1869 A

Triassic *Dinosauria*.

Nature, i, pp. 23-24.

Discusses, among other genera, *Bathynathus* and *Belodon*.

1869 B

On the representatives of the malleus and the incus of the *Mammalia* in the other *Vertebrata*.

Proc. Zool. Soc. Lond., 1869, pp. 391-407, with 8 figs. in the text.

1869 C

On *Hyperodapedon*.

Quart. Jour. Geol. Soc., Lond., xxv, pp. 138-152; 157-158, with 5 figs. in the text.

1869 D

On the upper jaw of *Megalosaurus*.

Quart. Jour. Geol. Soc. Lond., xxv, pp. 311-314, with pl. xii.

1870 A

On the progress of palæontology. Anniversary address delivered before the Geological Society.

Nature, i, pp. 437-443.

1870 B

The anniversary address of the president [of the Geol. Soc. Lond.].

Quart. Jour. Geol. Soc., Lond., xxvi; Proceedings, pp. xxix-lxiv.

1870 C

Further evidences of the affinity between the Dinosaurian reptiles and birds.

Quart. Jour. Geol. Soc. Lond., xxvi, pp. 12-31.

Huxley, Thomas H.—Cont'd. 1870 D

The classification and affinities of the *Dinosauria*.

Quart. Jour. Geol. Soc. Lond., xxvi, pp. 32-51, with pl. iii.

1872 A

A manual of the anatomy of vertebrated animals.

Pp. 1-431, woodcuts 110. New York, D. Appleton & Co., 1872.

1874 A

On the structure of the skull and of the heart of *Menobranchius lateralis*.

Proc. Zool. Soc. Lond., 1874, pp. 186-204, with pls. xxix-xxxii.

1875 A

Note on the development of the columella auris in the *Amphibia*.

Report Brit. Assoc. Adv. Sci., 44th meeting, Belfast, 1874, pp. 141-142.

Abstract in Nature, vol. xi, 1874, p. 68.

1875 B

On *Stagonolepis robertsoni*, and on the evolution of the *Crocodylia*.

Quart. Jour. Geol. Soc. Lond., xxxi, pp. 423-438, with pl. xix.

1875 C

Amphibia.

Encyclop. Brit., ed. 9, i, pp. 750-771, with 26 figs. in the text.

1876 A

On *Ceratodus forsteri*, with observations on the classification of fishes.

Proc. Zool. Soc. Lond., 1876, pp. 24-59, with 11 woodcuts in the text.

1876 B

On the evidence as to the origin of existing vertebrate animals.

Nature, xiii, pp. 388-389, 410-412, 429-430, 467-469, 514-516; xiv, pp. 33-34.

Abstracts of 6 lectures delivered at the Royal School of Mines.

1876 C

The direct evidence of evolution; (ii), the negative and favorable evidence.

Popular Sci. Monthly, lvi, pp. 207-223, 285-298, with illus.

1880 A

On the cranial and dental characters of the *Canidæ*.

Proc. Zool. Soc. Lond., 1880, pp. 238-288, with 16 woodcuts in the text.

1880 B

On the application of the laws of evolution to the arrangement of the *Vertebrata*, and more particularly of the *Mammalia*.

Proc. Zool. Soc. Lond., 1880, pp. 649-661.

- Huxley, Thomas H.**—Cont'd. 1883 A
On the oviducts of *Osmerus*, with remarks on the relations of the teleostean with the ganoid fishes.
Proc. Zool. Soc. Lond., 1883, pp. 131-139, with 2 woodcuts.
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- 1887 A
Further observations on *Hyperodapedon gordonii*.
Quart. Jour. Geol. Soc., xliii, pp. 675-694, with pls. xxvi, xxvii.
- Hyrtl, Joseph.** 1853 A
Ueber normale Quertheilung der Saurierwirbel.
Sitzungsber. Akad. Wissensch. Wien, math.-nat. Cl., x, pp. 185-192.
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- 1854 A
Beitrag zur Anatomie von *Heterotis ehrenbergii* C. V.
Denkschr. k. Akad. Wissensch. Wien, math.-nat. Cl., viii, pp. 73-88, with pls. i-iii.
The writer makes comparisons of *Heterotis* with *Osteoglossum*.
- Ihering, H. von.** 1891 A
Sobre la distribución geográfica de los Creodontes.
Revista Argentina de Historia Natural, i, pp. 209-213.
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- 1891 B
Ueber die zoologisch-systematische Bedeutung der Gehörorgane der Teleostier.
Zeitschr. Wissensch. Zool., lii, pp. 477-514, with pl. xxxi.
See also Sitzungsbericht Gesellsch. naturf. Freunde Berlin, 1891, pp. 23-26.
- Iwanzon, Nikolai.** 1887 A
Der *Scaphirhynchus*. Vergleichend-anatomische Beschreibung.
Bull. Soc. Imp. des Naturalistes de Moscou (n. s.), i, pp. 1-41, with pls. i, ii.
- Jaccard, Auguste.** See **Pictet and Jaccard.**
- Jackson, C. T.** 1851 A
Description of five new species of fossil fishes.
Proc. Boston Soc. Nat. Hist., iv, pp. 138-142.
Describes *Palæoniscus alberti*, *P. brownii*, and *P. cairnsii*; the others unnamed.
-
- 1851 B
Descriptions of the fossil fishes of the Albert coal mine.
Pp. 22-25 of "Report on the Albert coal mine," etc., Boston, 1851.
Plates not issued with the text and missing in the copy examined.
- Jackson, J. B. S.** 1845 A
On the fossil bones of *Mastodon giganteus* from marl pit in New Jersey.
Proc. Boston Soc. Nat. Hist., ii, pp. 60-62.
- Jaeger, Georg Friedr.** 1828 A
Ueber die fossile Reptilien welche in Württemberg aufgefunden worden sind.
Pp. i-vi, 1-48, with pls. i-vi. Stuttgart. 1828.
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- 1844 A
Ueber die Stellung und Deutung der Zähne des Wallrosses.
Müller's Archiv f. Anat., Physiol., etc., 1844, pp. 70-75.
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- 1851 A
Berichtigung einer Angabe Cuviers über einen Narwhalschädel des Stuttgarter Naturalienkabinetts, an welchen beide Stosszähne aus den Zahnhöhlen hervorragen sollen.
Jahreshefte Vereins vaterl. Naturkunde Württembergs, vii, pp. 24-32, with 2 figs. on pl. i.
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- 1857 A
Bemerkungen über die Veränderungen der Zähne von Säugethieren im Lauf ihrer Entwicklung, namentlich (A) bei dem Narwhal (*Monodon monoceros*) und (B) dem Cachalot (*Physeter macrocephalus*).
Bull. Soc. Imp. Naturalistes Moscou, xxx, pt. ii, pp. 571-580, with 1 text fig.
- Jaekel, O.** 1884 A
Die Selachier aus dem oberen Muschelkalk Lothringens.
Abhandl. geol. Specialkarte von Elsass-Lothringen, iii, pp. 275-332, with pls. vii-x.
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- 1890 A
Ueber die systematische Stellung und über fossile Reste der Gattung *Pristiophorus*.
Zeitschr. deutsch. geol. Gesellsch., xlii, pp. 86-120, with pls. ii-v, and 7 figs. in the text.
See also Jaekel, O., in Archiv. für Naturgeschichte, lviii, Bd. 1, pp. 15-48.
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- 1890 B
Ueber *Phaneropleuron* und *Hemictenodus*, n. g.
Sitz.-Ber. Gesellsch. naturforsch. Freunde Berlin, 1890, pp. 1-8, with 2 figs. in the text.
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- 1890 C
Ueber die Kiemenstellung und die Systematik der Selachier.
Sitz.-Ber. Gesellsch. naturforsch. Freunde Berlin, 1890, pp. 47-57, with 3 figs. in the text.
-
- 1890 D
Bemerkungen über Flossenstacheln oder Ichthyodoruliten im Allgemeinen.
Sitz.-Ber. Gesellsch. naturforsch. Freunde Berlin, 1890, pp. 119-131, with 3 figs. in the text.

Jaekel, O.—Continued.

1891 A

Ueber *Coccosteus*.

Zeitschr. deutsch. geol. Gesellsch., xlii, pp. 773-774.

1891 B

Ueber *Menaspis armata* Ewald.

Sitz.-Ber. Gesellsch. naturforsch. Freunde Berlin, 1891, pp. 115-131.

Discusses, among other matters, the systematic position of the Elasmobranchs.

1891 C

Referate über die in den letzten Jahren erschienenen Arbeiten über Pleuracanthiden.

Neues Jahrbuch Mineralogie, etc., 1891, ii, pt. iii, pp. 161-170.

Herein are included reviews of a number of writers on the genera *Pleuracanthus*, *Xenacanthus*, and *Orthacanthus*. These are Chas. Brongniart, L. Doederlein, E. Koken, and Anton Fritsch.

1891 D

Ueber mikroskopische Untersuchungen im Gebiet der Paläontologie.

Neues Jahrbuch Mineralogie, etc., 1891, i, Abhandl., pp. 173-198.

1892 A

Ueber *Cladodus* und seine Bedeutung für die Phylogenie der Extremitäten.

Sitz.-Ber. Gesellsch. naturforsch. Freunde Berlin, 1892, pp. 80-92.

1893 A

Ueber die Ruderorgane der Placodermen.

Sitz.-Ber. Gesellsch. naturforsch. Freunde Berlin, 1893, pp. 178-181.

1893 B

[Review of Dr. J. S. Newberry's "The Palæozoic fishes of North America."]

Neues Jahrbuch Mineral., etc., 1893, i, pp. 174-177.

1894 A

Die eocänen Selachier vom Monte Bolca. Ein Beitrag zur Morphogenie der Wirbelthiere.

Berlin, 1894, with 8 pls. and 39 text figs., pp. 1-176, 4 to.

1894 B

Ueber sogenannten Faltenzähne und complicirtere Zahnbildungen überhaupt.

Sitz.-Ber. Gesellsch. naturforsch. Freunde Berlin, 1894, pp. 146-153.

1895 A

Organisation der Pleuracanthiden.

Sitz.-Ber. Gesellsch. naturforsch. Freunde, Berlin, 1895, pp. 69-85, with 2 figs. in the text.

Jaekel, O.—Continued.

1895 B

Ueber eine neue Gebissform fossiler Selachier.

Sitz.-Ber. Gesellsch. naturforsch. Freunde Berlin, 1895, pp. 200-202.

Refers to the dentition of *Janassa* and *Petalodus*.

1896 A

Ueber die Körperform und Hautbedeckung von Stegocephalen.

Sitz.-Ber. Gesellsch. naturforsch. Freunde Berlin, 1896, pp. 1-8.

1896 B

Die Stammform der Wirbelthiere.

Sitz.-Ber. Gesellsch. naturforsch. Freunde Berlin, 1896, pp. 107-129.

1898 A

Ueber die verschiedenen Rochentypen.

Sitz.-Ber. Gesellsch. naturforsch. Freunde Berlin, 1898, pp. 44-53.

1898 B

Ueber *Hybodus*.

Sitz.-Ber. Gesellsch. naturforsch. Freunde, 1898, pp. 135-146, with 3 figs. in the text.

1898 C

Verzeichniss der Selachier des Mainzer Oligocäns.

Sitz.-Ber. Gesellsch. naturforsch. Freunde Berlin, 1898, pp. 161-169.

1899 A

Ueber die Organisation der Petalodonten.

Zeitschr. deutsch. geol. Gesellsch. li, pp. 258-298, with pls. xiv, xv, and 7 text figs.

1899 B

Ueber die Zusammensetzung des Kiefers und Schultergürtels von *Acanthodes*.

Zeitschr. deutsch. geol. Gesellsch., li, Protokolle, pp. 56-60, with 2 text figs.

For more extended paper see Verhandl. deutsch. zool. Gesellsch., 1899, pp. 249-258, with 2 text figs.

1900 A

Ueber die Reste von Edestiden und die neue Gattung *Helicoprion*.

Neues Jahrb. Min., 1900, ii, 144-148.

A review of Karpinsky, A. 1899 A.

James, Joseph F.

1891 A

The Biological Society of Washington.

Amer. Naturalist, xxv, pp. 298-299.

Contains report of remarks by Profs. H. F. Osborne and O. C. Marsh on Cretaceous mammals.

- Jefferson, Thomas.** 1799 A
A memoir on the discovery of certain bones of a quadruped of the clawed kind in the western parts of Virginia.
Trans. Amer. Philos. Society, iv, pp. 246-260.
The first account of the bones of *Megalonyx*.
This work is said by C. G. Giebel to have been issued in 1797.
- Jeffries, J. A.** 1881 A
On the fingers of birds.
Bull. Nuttall Ornithological Club, vi, pp. 6-11.
- 1882 A
On the claws and spurs on birds' wings.
Proc. Bost. Soc. Nat. Hist., xxi, pp. 301-306.
- 1883 A
Sternal processes in *Gallinæ*.
Science, ii, p. 622.
- 1883 B
Osteology of the cormorant.
Science, ii, p. 739.
- 1884 A
Osteology of the cormorant.
Science, iii, p. 59.
- Johnston, Christopher.** 1859 A
Note on Odontology.
Amer. Jour. Dental Science, ix, pp. 337-343.
Gives the name *Astrodon* to certain teeth found by him at Bladensburg, Maryland. No description is furnished.
- Jordan, D. S.** 1891 A
Relations of temperature to vertebræ among fishes.
Proc. U. S. Nat. Mus., xiv, pp. 107-120.
- Jordan D. S., and Evermann, B. W.** 1896 A
The fishes of North and Middle America. A descriptive catalogue of the species of fish-like vertebrates found in the waters of North America, north of the Isthmus of Panama.
Washington: Government Printing Office, 1896, pt. i, pp. i-lx, 1-1240.
Bull. U. S. Nat. Mus. No. 47.
- 1898 A
The fishes of North America. A descriptive catalogue of the species of fish-like vertebrates found in the waters of North America, north of the Isthmus of Panama.
Part ii, pp. i-xxx, 1241-2183; part iii, pp. i-xxiv, 2184-3136.
- 1900 A
The fishes of North and Middle America, etc.
Part iv, pp. i-ci, 3137-3313, with pls. i-cccxcii.
- Jourdan, —** 1861 A
Description de restes fossiles de deux grands mammifères constituant le genre *Rhizoprion* (ordre des cétacés, groupe des Delphinoïdes) et le genre *Dinocyon* (ordre des carnassiers), famille des canides.
Ann. Sci. Naturelles (4), xvi, pp. 367-374, pl. x.
- Karpinsky, A.** 1899 A
Ueber die Reste von Edestiden und die neue Gattung *Helicoprion*.
Verhandl. k. russ. mineralog. Gesellsch., St. Petersburg (2), xxxvi, No. 2.
In Russian; quoted from Jaekel, 1900 A.
- Kaup, J.** 1832 A
Ueber zwey Fragmente eines Unterkiefers von *Mastodon angustidens* Cuv., nach welchen diese Art in die Gattung *Tetracaulodon* gehört.
Oken's Isis, xxv, cols. 627-630.
- 1832 B
Ueber *Rhinoceros incisivus* Cuv., und eine neue Art, *Rhinoceros schleiermacheri*.
Oken's Isis, 1832, cols. 898-904.
Establishes genus *Accratherium*.
- 1833 A
[Letter addressed to von Leonhard.]
Neues Jahrbuch Mineral, etc., 1833, p. 327.
Establishes the genus *Hippotherium*, with *Equus gracilis* as type.
- 1835 A
Die zwei urweltlichen pferdeartigen Thiere welche im tertiären Sande bei Eppelsheim gefunden werden, bilden eine eigene Unter-Abtheilung der Gattung Pferd, welche in der Zahl der Fingerglieder den Uebergang zur Gattung *Palæotherium* macht und zwischen diese und Pferd zu stellen ist.
Nova Acta Caes. Leop.-Carol. Akad. Naturforsch., xvii, pp. 173-182, with pl. xii B.
- 1843 A
Bemerkungen über die drei Arten *Mustodon* und die drei Arten *Tetracaulodon* des Hon. Isaak Hays.
Archiv. Naturgesch., ix, i, pp. 168-175.
See Hays, I., Proc. Amer. Phil. Soc., 1843, vol. ii, pp. 264-266.
- Kehner, F. A.** 1876 A
Zur Phylogenie des Beckens.
Verhandl. des naturhist.-medicin. Vereins zu Heidelberg, v, pp. 346-359; pls. vii, viii.
- Kehrer, Gustav.** 1886 A
Beiträge zur Kenntniss des Carpus und Tarsus der Amphibien, Reptilien und Säuger.
Berichte naturforsch. Gesellsch. zu Freiberg, Berichte i, pp. 73-88, with pl. iv.

- Kersten, Hermann.** 1821 A
Capitis *Trichechi rosmari* descriptio osteologica. Dissertatio inauguralis. Berolini, 8 vo., pp. 5-24, with pls. i-iii.
- Keyes, Charles R.** 1888 A
On the fauna of the lower Coal measures of central Iowa.
Proc. Acad. Nat. Sci. Phila., 1888, pp. 222-246, with pl. xii.
Notes occurrence of *Petrodus occidentalis* and an unidentified species of *Diplodus*.
- 1891 A
Fossil faunas in central Iowa.
Proc. Acad. Nat. Sci. Phila., 1891, pp. 242-265.
Notes occurrence of *Thrinacodus duplicatus?* and *Deltodus intermedius*.
- 1894 A
Palæontology of Missouri (part ii).
Missouri Geol. Survey, v, pp. 1-266, with pls. xxxiii-lvi.
The vertebrates are catalogued in chapter xv, pp. 229-239. The synonymy is given, but no descriptions or figures, and no species are mentioned, except the fishes. A list of the fossil vertebrates of Missouri was published in 1890 by G. Hambach (which see), and that contained, with rare omissions, the species which are found in this list of Keyes; also some which are not included in Keyes's list.
- Kindle, Edward M.** 1898 A
A catalogue of the fossils of Indiana, accompanied by a bibliography of the literature relating to them.
22d Ann. Report Depart. Geol. and Natural Resources [of Indiana] for 1897, pp. 407-514.
The list of fossil vertebrates is found on pp. 484-485.
- King, Alfred T.** 1844 A
Description of fossil footmarks supposed to be referable to the classes birds, *Reptilia*, and *Mammalia* found in the Carboniferous series in Westmoreland County, Pa.
Proc. Acad. Nat. Sci. Phila., ii, pp. 175-180, and 7 woodcuts.
- 1845 A
Description of fossil footmarks found in the Carboniferous series in Westmoreland County, Pa.
Amer. Jour. Sci., xlviii, pp. 343-352, with 12 figs.
- 1845 B
Description of fossil footprints.
Proc. Acad. Nat. Sci. Phila., ii, pp. 299-300.
No names are given to the footprints.
- 1845 C
Footprints.
Amer. Jour. Sci., xlix, pp. 216-217, with figs.
Figures the footprints described in King, A. T. 1845 A.
- King, Alfred T.—Continued.** 1846 A
Footprints in the coal rocks of Westmoreland County, Pa.
Amer. Jour. Sci. (2), i, p. 268, with 2 text figs.
No names are given to these tracks. Lyell regards them as artificial. (Lyell, C. 1846 A. p. 25.)
- King, Clarence.** 1878 A
Systematic geology.
U. S. Geol. Explor. 40th parallel, Clarence King, geologist in charge. i.
In this volume are found several lists of the fossil vertebrates which characterize the Tertiary formations. No descriptions of the remains are given. The lists are found on the following pages: Jurassic, p. 346; Wasatch, p. 376-377; Bridger, p. 403-405; Uinta, p. 407; White R., p. 411; John Day, p. 424; Loup Fork, p. 430; Equus beds, p. 443. These lists were no doubt furnished by Prof. O. C. Marsh.
- King, William.** 1850 A
A monograph of the Permian fossils of England. London, 1850. Printed for the Palæontographical Society.
p. i-xxxviii; 1-258, with pls. i-xxviii.
- Kingsley, J. S., and Ruddick, W. H.** 1900 A
The ossicula auditus and mammalian ancestry.
Amer. Naturalist, xxxiii, pp. 219-230, with 3 text figs.
- Kiprijanoff, Valerian.** 1852 A
Fisch-Ueberreste im Kurschen eisenhaltigen Sandsteine. I, II.
Bull. Soc. Imp. Naturalistes de Moscou, xxv, pt. 2, pp. 221-226; 483-495, with pls. xii, xiii.
- 1853 A
Fisch-Ueberreste im Kurschen eisenhaltigen Sandsteine.
Bull. Soc. Imp. Naturalistes de Moscou, xxvi, pt. 2, pp. 286-294, with pl. ii.
- 1854 A
Fisch-Ueberreste im Kurschen eisenhaltigen Sandsteine. V.
Bull. Soc. Imp. Naturalistes de Moscou, xxvii, pt. 2, pp. 273-397, with pls. ii, iii.
- 1881 A
Studien über die fossilen Reptilien Russlands. Th. I. Gattung *Ichthyosaurus* König, aus dem Severischen Sandstein oder Osteolith der Kreidegruppe.
Mém. Acad. Sci. St. Pétersbourg (7), xxviii, No. 8, pp. 1-103, with pls. i-xviii.
A considerable portion of this paper and a number of the plates are devoted to the microscopic structure of the bones of *Ichthyosaurus*.
- 1882 A
Studien über die fossilen Reptilien Russlands. Theil II, Gattung *Plesio-*

Kiprijanoff, Valerian—Continued.

saurus Conybeare, aus dem Severischen Sandstein oder Osteolith der Kreidegruppe.

Mém. Acad. Imp. Sci. St. Pétersbourg (7), xxx, No. 6, pp. 1-55, with pls. i-xix.

Pp. 34-47, with pls. xv-xix, are devoted to the microscopical structure of the bones of species of *Plesiosaurus*.

Kittary, Modeste. 1850 A

Recherches anatomiques sur les poissons du genre *Acipenser*.

Bull. Soc. Imp. Naturalistes Moscou, xxiii, pt. 2, pp. 389-445, with pls. vi, vii.

Kittl, Ernst. 1887 A

Beiträge zur Kenntniss der fossilen Säugethiere von Maragha in Persien. I. Carnivoren.

Annalen des k. k. naturhistorischen Hofmuseums, Wien, ii, pp. 317-338, with pls. xiv-xviii.

Klaatsch, H. 1890 A

Zur Morphologie der Fischschuppen und zur Geschichte der Hartsubstanzgewebe. I. Die Schuppen der Selachier. II. Die Rhombenschuppen der Ganoiden. III. Die Schuppen der Teleostier. IV. Die Cycloidschuppen der Dipnoer und fossiler Ganoiden. Die Phylogenese der "Cycloidschuppen." V. Die Schuppen von *Ichthyophis*. VI. Die Ableitung der Schuppen. VII. Die Geschichte der Hartsubstanzgewebe.

Morpholog. Jahrbuch, xvi, pp. 97-203; 209-258, with pls. vi-viii.

Appended are references to the works of 48 authors who have treated the subject.

1893 A

Ueber die Wirbelsäule der Dipnoer.

Verhandl. anatom. Gesellschaft, 7ten Versamml., 1893, pp. 130-132.

Discusses the structure of the vertebral column of *Ceratodus* and *Protopterus*, followed by remarks by Hatschek.

1894 A

Ueber die Herkunft der Scleroblasten.

Morphologisches Jahrbuch, xxi, pp. 153-240, with pls. v-ix and 6 figs. in text.

A contribution to knowledge of the genesis of bone.

1896 A

Die Brustflosse der Crossopterygier. Ein Beitrag zur Anwendung der Ar-

Klaatsch, A.—Continued.

chipterygium-Theorie auf die Gliedmassen der Landwirbelthiere.

Festschrift zum 70sten Geburtstage von Carl Gegenbaur, i, pp. 261-391, with pls. i-iv, and 42 text figs.

Appended is a list of 75 papers pertaining to the subject discussed.

Klein, E. F. 1863 A

Beiträge zur Osteologie der Crocodilskädel.

Jahreshefte Vereins vaterl. Naturkunde in Württemberg, xix, pp. 70-100.

1879 A

Beiträge zur Osteologie des Schädels der Knochenfische.

Jahreshefte Vereins vaterl. Naturkunde in Württemberg, xxxv, pp. 66-126, with pl. i.

1881 A

Beiträge zur Osteologie der Fische.

Jahreshefte Vereins vaterl. Naturkunde in Württemberg, xxxvii, pp. 325-360, with pl. ii.

1885 A

Beiträge zur Bildung des Schädels der Knochenfische, ii.

Jahreshefte Vereins vaterl. Naturkunde in Württemberg, xli, pp. 107-261, with pls. ii, iii.

1886 A

Beiträge zur Bildung des Schädels der Knochenfische, iii.

Jahreshefte Vereins vaterl. Naturkunde in Württemberg, xlii, pp. 205-300, with pls. vii, viii.

Klever, Ernst. 1889 A

Zur Kenntniss der Morphogenese des Equidengebisses.

Morpholog. Jahrbuch, xv, pp. 308-330, with pls. xi-xiii.

Appended is a list of the works of 42 authors who have treated the subject of the dentition of the *Equidæ*.

Klippart, John H. 1875 A

Discovery of *Dicotyles* (*Platygonus*) *compressus*, Le Conte.

Proc. Amer. Assoc. Adv. Sci., 23d meeting, Hartford, 1874, pp. 1-6.

Also in Cincinnati Quarterly Journal of Science, 1875, vol. ii, pp. 1-6.

1875 B

Mastodon remains in Ohio.

Cincinnati Quart. Jour. Sci., ii, pp. 151-155.

Klunzinger, C. B. 1871 A

Synopsis der Fische des Rothen Meeres. II Theil.

Verhandl. zool.-botan. Gesellsch. in Wien, xxi, pp. 441-688.

- Kneeland, S.** 1850 A
The *Manatus* not a cetacean but a pachyderm.
Proc. Amer. Assoc. Adv. Sci., 3d meeting, Charleston, 1850, pp. 42-47.
- Kner, Rudolph.** 1847 A
Ueber die beiden Arten *Cephalaspis lloydii* und *lewissii*, Agassiz.
Haidinger's Naturwiss. Abhandl. i, pp. 159-168, with pl. v.
- 1860 A
Zur Charakteristik und Systematik der Labroiden.
Sitz.-Ber. k. Akad. Wissensch. Wien, math.-nat. Cl., xl, pp. 41-57, with pls. i-ii.
- 1863 A
Ueber einige fossile Fische aus den Kreide- und Tertiär-schichten von Comen und Podsed.
Sitz.-Ber. k. Akad. Wissensch. Wien, math.-nat. Cl., xlviii, pp. 126-148, with pls. i-iii.
- 1866 A
Betrachtungen über die Ganoiden, als natürliche Ordnung.
Sitz.-Ber. k. Akad. Wissensch. Wien, liv, Abth. i, pp. 519-536.
- 1866 B
Die fossile Fische der Asphaltschiefer von Seefeld in Tirol.
Sitz.-Ber. k. Akad. Wissensch. Wien, math.-naturw. Cl., liv, Abth. i, pp. 303-334, with pls. i-vi.
For "Nachtrag" i, see the Sitzungsber, lvi, Abth. i, pp. 898-909; "Nachtrag" ii, pp. 909-913, with pls. i-iii.
- 1866 C
Die Fische der bituminösen Schiefer von Raibl in Kärnthen.
Sitz.-Ber. k. Akad. Wissensch. Wien, liii, pp. 1-46, with pls. i-vi.
- 1867 A
Ueber *Orthacanthus decheni* Goldf. oder *Xenacanthus decheni* Beyr.
Sitz.-Ber. k. Akad. Wissensch. Wien, math.-naturw., Cl., lv, pp. 540-584, with pls. i-x.
- 1868 A
Ueber *Conchopoma gadiforme* nov. gen. et spec. und *Acanthodes* aus dem Rothliegenden (der untern Dyas) von Lebach bei Saarbrücken in Rheinpreussen.
Sitz.-Ber. k. Akad. Wissensch. Wien, math.-naturw., Cl., lvii, pt. i, pp. 278-304, with pls. i-viii.
- Knight, —** 1835 A
[On fossil jaw of buffalo.]
Amer. Jour. Sci., xxvii, p. 166.
Opinion expressed on a jaw found at Chatauqua Lake, N. Y.
- Knight, W. C.** 1895 A
A new Jurassic plesiosaur from Wyoming.
Science (2), ii, p. 449.
Describes *Cimoliosaurus rex* Knight.
- 1898 A
Some new Jurassic vertebrates from Wyoming.
Amer. Jour. Sci. (4), v, 186, with 2 figs. in the text.
Describes *Ceratodus robustus* and *C. americanus*.
- 1898 B
Some new Jurassic vertebrates from Wyoming.
Amer. Jour. Sci. (4), v, pp. 378-380, with plate of 3 figs.
Describes and figures *Megalneusaurus rex*, a new genus based on *Cimoliosaurus rex* Knight.
- 1899 A
The Nebraska Permian.
Jour. Geology, vii, pp. 357-374.
- 1900 A
Some new Jurassic vertebrates.
Amer. Jour. Sci. (4), x, pp. 115-119, with 1 page of figs.
- Kober, J.** 1882 A
Studien über *Talpa europæa*.
Verhandl. naturf. Gesellsch. in Basel, vii, Theil, pp. 62-119, with pls. i, ii.
- 1884 A
Studien über *Talpa europæa*.
Verhandl. naturf. Gesellsch. in Basel, vii, Theil, pp. 465-485, with pl. vii.
- Koch, Albert.** 1839 A
The mammoth (mastodon? Eds.).
Amer. Jour. Sci., xxxvi, pp. 198-200.
This article is for the most part an extract from the *Phila. Presbyterian*, but Leidy (1869 A, p. 393) attributes the authorship to Dr. Koch.
- 1839 B
Remains of the mastodon in Missouri.
Amer. Jour. Sci., xxxvii, pp. 191-192.
- 1840 A
A short description of fossil remains found in the State of Missouri by the author.
Written and published by Albert Koch, proprietor of the St. Louis Museum, St. Louis, Churchill & Stewart, printers, 1840, pp. 1-8, with 1 pl.

- Koch, Albert**—Continued. 1842 A
On the genus *Tetracaulodon*.
Proc. Geol. Soc. Lond., iii, pp. 714-716.
- 1843 A
Description of the *Missourium theristocaulodon* (Koch), or Missouri leviathan (*Leviathan missouriensis*), together with its supposed habits and Indian traditions; also comparison on the whale, crocodile, and missourium with the leviathan as described in the 41st chapter of the Book of Job.
Fifth ed., enlarged, Dublin, 1843, pp. 1-28, with fig. on the front cover.
An edition of this was published as early as 1841.
- 1845 A
Die Riesenthier der Urwelt, oder das neuentdeckte *Missourium theristocaulodon*, und die Mastodonten im Allgemeinen und Besondern.
Berlin, 1845, pp. 99, pls. viii.
For review of this paper see Neues Jahrb. 1845, pp. 760-766.
- 1845 B
[Extract from a letter to Dr. Geinitz on *Zygodon*.]
Neues Jahrb. f. Mineralogie, 1845, p. 676, with 3 figs. in the text.
- 1851 A
Entdeckung der Zeuglodonten-Reste.
Haidinger's Berichte Mittheil. Freunden Naturwissensch. in Wien, vii, pp. 198-199, 203-204.
- 1851 B
Das Skelet des *Zeuglodon macrospondylus*.
Haidinger's Naturwissensch. Abhandl., iv, and with its own pagination, pp. 53-64, with pl. vii.
- 1857 A
Mastodon remains in the State of Missouri, together with evidences of the existence of man contemporaneously with the mastodon.
Trans. Acad. Sci. St. Louis, i, pp. 61-64.
- 1857 B
[Report of Dr. Koch on explorations in Mississippi and Arkansas for the purpose of obtaining bones of *Zeuglodon*.]
Trans. Acad. Nat. Sci. St. Louis, i, pp. 17-19.

- Koch, Albert**—Continued. 1858 A
On the bones of *Mastodon*.
Trans. Acad. Sci., St. Louis, i, pp. 116-117.
Remarks made at meeting of the Academy and referring to Koch's discoveries.
Besides the papers above given which owe their authorship to A. Koch the following are herewith recorded, but have not been examined:
Beschreibung des *Missurian Theristocaulodon* Koch, oder Missouri-Leviathan (*Leviathan missouriensis*); die vermuthete Lebensart desselben und indianische Traditionen über der Ort, wo es ausgegraben wurde; ferner Vergleichen des Wallfisches, des Krokodils und des Missurium mit dem Leviathan, wie solcher im 41 Capitel des Buches Hiob beschrieben wird.
Zeitschrift f. vergleich. Erdkunde, Magdeburg, 1845, iv, pp. 33-51.
- Die Mastodontoiden der Urwelt.
With 8 plates. Berlin, 1845.
- Kurze Beschreibung des Hydrarchos harlani (Koch), eines riesenmässigen Meeresgeheuers und dessen Entdeckung in Alabama in Nord-Amerika im Frühjahr 1845. Dresde[n].
- Ueber die Gattung *Zeuglodon* Owen (*Basilosaurus* Harlan, *Hydrarchus* Koch, *Dorudon* Gibbes).
Uebersicht Schlesische Gesellschaft vaterl. Cultur, 1850, pp. 59-60.
- Kölliker, Albert.** 1859 A
On the different types in the microscopic structure of the skeleton of osseous fishes.
Proc. Roy. Soc. London, 1859, ix, pp. 656-668.
Issued in separate form, pp. 1-13.
- 1860 A
Ueber das Ende der Wirbelsäule der Ganoiden und einige Teleostier.
Pp. 27, with 4 pls., Leipzig, 1860.
- 1860 B
On the structure of the chorda dorsalis of the Plagiostomes and some other fishes, and on the relation of the proper sheath to the development of the vertebræ.
Proc. Roy. Soc. Lond., x, pp. 214-222.

Kölliker, Albert—Continued. 1863 A

Weitere Beobachtungen über die Wirbel der Selachier, insbesondere über die Wirbel der *Lamnoides*, nebst allgemeinen Bemerkungen über die Bildung der Wirbel der Plagiostomen.

Pp. 1-51, with pls. i-v; Frankfurt-on-Main, 1864.

Koenen, A. von . 1883 A

Beitrag zur Kenntniss der Placodermen des norddeutschen Oberdevon's.

Abhandl. k. Gesellsch. Wissensch. Göttingen, xxx, pp. 1-41, with pls. i-iv.

1890 A

Coccosteus decipiens.

Geol. Magazine (3), vii, p. 191.

Discusses question of the existence of a pectoral spine.

1895 A

Ueber einige Fischreste des norddeutschen und böhmischen Devons.

Abhandl. k. Gesellsch. Wissensch. Göttingen, xl, math.-phys. Cl., art. 2, pp. 1-37, with pls. i-v.

Koken, Ernst. 1883 A

Die Reptilien der norddeutschen unteren Kreide.

Zeitschr. deutsch. geol. Gesellsch., xxxv, pp. 735-827, with pls. xxiii-xxv.

1884 A

Ueber Fisch-Otolithen, insbesondere über diejenigen der norddeutschen Oligocän-Ablagerungen.

Zeitschr. deutsch. geol. Gesellsch., xxxvi, pp. 500-565, with pls. ix-xii.

1886 A

[Review of papers by L. Dollo and V. Lemoine.]

Neues Jahrb. Min. Geol. und Paläont., 1886, ii, pp. 289-292, Referate.

1887 A

Die Dinosaurier, Crocodiliden und Saurpterygier des norddeutschen Wealden.

Paläontolog. Abhandl., iii, pp. 309-419 (1-111), with 9 pls. and 30 figs. in the text.

1888 A

Neue Untersuchungen an tertiären Fisch-Otolithen.

Zeitschr. deutsch. geol. Gesellsch., xl, pp. 274-305, with pls. xvii-xix.

Describes and figures 23 species of otoliths of fishes from the Tertiary deposits of the Southern States of the United States.

Koken, Ernst—Continued. 1888 B

Thoracosaurus macrorhynchus, Bl., aus der Tuffkreide von Maastricht.

Zeitschr. deutsch. geol. Gesellsch., xl, pp. 754-773, with pl. xxxii.

1888 C

Eleutherocercus, ein neuer Glyptodont aus Uruguay.

Abhandl. k. Akad. Wissensch. Berlin, 1888, phys.-math. Cl., Abh. i, pp. 1-28, pls. i, ii.

1889 A

Ueber *Pleuracanthus* Ag. oder *Xenacanthus* Beyr.

Sitz.-Ber. Gesellsch. naturf. Freunde Berlin, 1889, pp. 77-94, with 5 figs. in the text.

1891 A

Neue Untersuchungen an tertiären Fisch-Otolithen, ii.

Zeitschr. deutsch. geol. Gesellsch., xliii, pp. 77-170, with pls. i-x, and 27 figs. in the text.

Description of species, a list of known species of Europe, and a discussion of the significance of the otoliths and of the organ of hearing for the natural classification of fishes.

1891 B

[Remarks on the *Physostomi*.]

Sitz.-Ber. Gesellsch. naturf. Freunde Berlin, 1891, pp. 26-28.

Deals especially on relationship of *Cyprinidae* and *Siluridae*.

1893 A

Beiträge zur Kenntniss der Gattung *Nothosaurus*.

Zeitschr. deutsch. geol. Gesellsch., xlv, pp. 337-377, with pls. vii-xi, and 12 figs. in the text.

1896 A

Die Reptilien des norddeutschen Wealden.

Paläontolog. Abhandl., vii (n. s. iii), pp. 117-126 (1-10) with 4 pls. and 1 fig. in the text.

Kollmann, J. 1888 A

Handskelett und Hyperdaktylie.

Verhandl. anatom. Gesellsch., 2ten Versamml., pp. 25-39, with plate of 12 figs.

A paper with the same title is found in Verhandl. Gesellsch. Basel, viii, 1890, pp. 604-626; pl. viii.

Komnek, L. See **Van Beneden** and **Komnek**.

Koninck, L. G. de. 1844 A

Description des animaux fossiles que se trouvent dans le terrain carbonifère de Belgique.

Pp. i-iv; 1-716, with atlas of 60 pls.

Contains (pp. 608-618) descriptions of a few fishes.

- Koninck, L. G. de**—Continued. 1878 A
Faune du Calcaire carbonifère de la Belgique. Première partie, poissons et genre nautilé.
Annales Musée nat. Belgique, ii, pp. 9-76, with pls. i-viii, and figs. in the text.
The pages referred to are devoted to descriptions of the fishes.
- Kosmak, George William.** 1895 A
Dermal armor of the sturgeon.
Jour. New York Microscop. Soc., xi, pp. 1-21, with pls. xlvii-xlviii.
- Köstlin, Otto.** 1844 A
Der Bau des knöchernen Kopfes in den vier Klassen der Wirbelthiere.
Stuttgart, 1844, 8 vo, pp. i-x; 1-506, with pls. i-iv.
- Kowalevsky, Woldemar.** 1873 A
Monographie der Gattung *Anthracotherium* Cuv. und Versuch einer natürlichen Classification der fossilen Hufthiere.
Palæontographica, xxii, 131-346, with pls. vii-xvii.
- 1873 B
Sur l'*Anchitherium aurelianense* Cuv. et sur l'histoire paléontologique des chevaux.
Mém. Acad. Imp. Sci. St. Pétersbourg (7), xx, No. 5, pp. i-iv; 1-73, with pls. i-iii.
- 1874 A
On the osteology of the *Hyopotamidæ*.
Philosoph. Trans. Roy. Soc. Lond., clxiii, pp. 19-94; pls. 35-40.
- 1876 A
Osteologie des Genus *Entelodon* Aym.
Palæontographica, xxii, 415-450, with pls. xxv-xxvii.
- Kramberger, Dragutin.** 1881 A
Studien über die Gattung *Saurocephalus* Harlan.
Jahrbuch k.-k. geol. Reichsanstalt Wien., xxxi, pp. 371-379.
Saurocephalus and related genera are placed in family *Scopeloidei* and subfamily *Saurodontidæ*, and a new genus *Solenodon* is described.
- Krause, W.** 1881 A
Zum Sacralhirn der Stegosaurier.
Biolog. Centralbl., i, p. 461.
- Krauss, Ferd.** 1858 A
Beiträge zur Osteologie des surinamischen *Manatus*.
Archiv. f. Anat., Physiol. wissenschaft. Med., 1858, pp. 390-425.
- Krauss, Ferd.**—Continued. 1862 A
Beiträge zur Osteologie des surinamischen *Manatus*.
Archiv f. Anat. Physiol., wissenschaft. Med., 1862, pp. 415-427; pl. xliii.
- 1870 A
Beiträge zur Osteologie von *Halicore*.
Archiv f. Anat. Physiol., wissenschaft. Med., 1870, pp. 525-614.
- Kreff, Gerard.** 1870 A
Description of a gigantic amphibian allied to the genus *Lepidosiren*, from the Wide Bay district, Queensland.
Proc. Zool. Soc. Lond., 1870, pp. 221-224, with 3 figs.
Description of *Ceratodus forsteri*.
- Kükenthal, Willy.** 1888 A
Über die Hand der Cetaceen.
Anatom. Anzeiger, iii, pp. 638-646; 912-915, with 6 figs. in the text.
- 1889 A
Vergleichend-anatomische und entwicklungsgeschichtliche Untersuchungen an Walthieren.
Denkschr. med.-naturwiss. Gesellsch. zu Jena., iii, pp. 1-200, with pls. i-xiii.
For conclusion see Kükenthal 1893 C.
- 1890 A
Über die Hand der Cetaceen.
Anatom. Anzeiger v, pp. 44-52, with 8 figs. in the text.
- 1890 B
Über Reste eines Hautpanzers bei Zahnwalen.
Anatom. Anzeiger, v, pp. 237-240.
- 1890 C
Ueber die Anpassung von Säugethieren an das Leben im Wasser.
Spengel's Zoolog. Jahrbücher, Abth. f. Systematik, Geog. und Biol. d. Thiere, v, pp. 373-399.
Translation in Ann. and Mag. Nat. Hist. (6), vii, 1891, pp. 153-179.
- 1891 A
Einige Bemerkungen über Säugethierbezeichnung.
Anatom. Anzeiger, vi, pp. 364-370.
- 1891 B
Das Gebiss von *Didelphys*.
Anatom. Anzeiger, vi, pp. 658-666, with 8 figs. in the text.
Abstract in Zoolog. Record for 1891, Mamm., p. 10.
- 1891 C
Ueber die Anpassung von Säugethieren an das Leben im Wasser.
Zoolog. Jahrbücher, Systematik, etc., v, pp. 373-399.

Kükenthal, Willy—Continued. 1892 A

Ueber die Entstehung und Entwicklung des Säugetierstammes.

Biolog. Centralbl., xii, pp. 400-413.

A translation of this paper is found in Ann. and Mag. Nat. Hist. (6), x, 1892, pp. 365-380.

1892 B

Ueber den Ursprung und die Entwicklung der Säugetierzähne.

Jenaische Zeitschr., xxvi (xix), pp. 469-489.

1893 A

Zur Entwicklung des Handskelettes des Krokodils.

Morpholog. Jahrbuch, xix, pp. 42-55, with pl. ii.

The part of the Morpholog. Jahrbuch containing this paper was issued in October, 1892.

1893 B

Mittheilungen über den Carpus des Weisswals. (Die Bildung des Hamatum und das Vorkommen von zwei und drie Centralien.)

Morpholog. Jahrbuch, xix, pp. 56-64, with pl. iii.

1893 C

Vergleichend-anatomische und entwicklungsgeschichtliche Untersuchungen an Walthieren. II.

Denkschr. med.-naturwiss. Gesellsch. zu Jena., iii, pp. 224-448, with pls. xiv-xxv.

1894 A

Entwicklungsgeschichtliche Untersuchungen am Pinnipediergebnisse.

Jenaische Zeitschr., xxviii (xxi), pp. 76-118, with pls. iii and iv.

1895 A

Ueber Rudimente von Hinterflossen bei Embryonen von Walen.

Anatom. Anzeiger, x, pp. 534-537.

1895 B

Zur Dentitionenfrage.

Anatom. Anzeiger, x, pp. 653-659.

Treats of the origin of the mammalian dentition.

1896 A

Zur Entwicklungsgeschichte des Gebisses von *Manatus*.

Anatom. Anzeiger, xii, pp. 513-526, with 10 figs. in the text.

1897 A

Vergleichend-anatomische und entwicklungsgeschichtliche Untersuchungen an Sirenen.

Semon's Zoolog. Forschungsreisen in Australien, etc., iv, pp. 1-7b, with pls. i-v and 47 text figs.

Kunth, A.

1872 A

Ueber *Pteraspis*.

Zeitschr. deutsch. geol. Gesellsch., xxiv, pp. 1-8, with pl. i.

L. P. B.

1885 A

Professor Marsh's Monograph of the *Dinocerata*.

Amer. Jour. Sci. (3), xxix, pp. 173-204, with 38 figs in the text.

Lahusen, I.

1880 A

Zur Kenntniss der Gattung *Bothriolepis*, Eichw.

Verhandl. russ.-kais. mineralog. Gesellsch., St. Petersburg (2), xv, pp. 125-139, with pls. i, ii.

Lambe, Lawrence M.

1898 A

On the remains of mammoths in the museum of the Geological Survey Department.

Ottawa Naturalist, xii, pp. 136-137.

1899 A

On reptilian remains from the Cretaceous of northwestern Canada.

Ottawa Naturalist, xiii, pp. 68-70.

See also Summary report of Geol. Surv. Dept. Canada for year 1898, pp. 182-190.

Account of fossil remains found in districts of Alberta and Assiniboia.

Landois, ———.

1871 A

Das Gebiss eines jungen Mammuth.

Verhandl. naturhist. Vereines preuss. Rheinlande, etc., xxviii, Corr. Bl., pp. 47-49, with pl. ix.

1881 A

Ueber die Reduktion der Zehen bei den Säugethieren durch Verkümmern und Verschmelzung.

Verhandl. naturf. Vereines preuss. Rheinlande, etc., xxxviii, Corr. Bl., pp. 125-129.

Lang, Fr., and Rütimeyer, L.

1867 A

Die fossilen Schildkröten von Solothurn.

Neue Denkschriften d. allgem. schweiz. Gesellsch. f. d. gesamt. Naturwissensch., xxii, art. 5, pp. 1-48, with pls. i, ii, consisting of profiles and sections and a geological map of the region.

Langdon, F. W.

1883 A

The giant beaver (*Castoroides ohioensis*)

Foster.

Jour. Cincinnati Soc. Nat. Hist., vi, pp. 238-239.

Lankester, E. R.

1862 A

Restoration of *Pteraspis*.

The Geologist, v, pp. 451-452, with 3 text figs.

- Lankester, E. R.**—Continued. 1864 A
On the discovery of the scales of
Pteraspis, with some remarks on the
cephalic shield of that fish.
Quar. Jour. Geol. Soc., xx, pp. 194-197, with
pl. xii.
- 1864 B
Restoration of *Pteraspis*.
The Geologist, vii, p. 136.
- 1865 A
On the genus *Pteraspis*.
Report Brit. Assoc. Adv. Sci., 34th meeting,
Bath, 1864, p. 100. See also p. 58.
Divided into subgenera *Pteraspis*, *Cyathaspis*,
and *Scaphaspis*.
- 1870 A
On a new *Cephalaspis* discovered in
America, etc.
Geol. Magazine, vii, pp. 397-398, with 3
woodcuts in the text.
Describes *C. dawsoni* and refers to the find-
ing of *Machairacanthus sulcatus*.
- 1873 A
On *Holaspis sericeus*, and on the re-
lationship of the fish-genera, *Pteraspis*,
Cyathaspis, and *Scaphaspis*.
Geol. Magazine, x, pp. 241-245, with pl. x.
- 1873 B
On *Scaphaspis* and *Pteraspis*.
Geol. Magazine, x, pp. 190-192.
Extract from the Academy of Jan. 1, 1873,
replying to Kunth.
- 1873 C
Note on *Holaspis sericeus*.
Geol. Magazine (1), x, pp. 331-332, with 1
woodcut.
- 1874 A
Magister Schmidt on the shields of
Pteraspis and *Scaphaspis*.
Geol. Magazine (2), i, p. 288.
See also **Moseley and Lankester**.
- Lapham, I. A.** 1855 A
On the number of teeth of the *Mas-*
todon giganteus.
Proc. Bost. Soc. Nat. Hist., v, pp. 133-136.
- Lartet, Éd.** 1837 A
Fossiles provenant du dépôt de San-
san.
Compte rendu Acad. Sci., Paris, v, pp. 418,
427.
- 1866 A
Note sur deux nouveaux siréniens
fossiles des terrains tertiaires du bassin
de la Garonne.
Bull. Soc. Géol. France, xxiii, pp. 673-686,
pl. xiii.
- Lataste, Fernand.** 1889 A
Considerations sur les deux denti-
tions des mammifères.
Jour. l'Anat. Physiol., xxv, pp. 200-222.
Numerous references are made to the writ-
ings of other authors.
- Lathrop, S. P.** 1851 A
Mastodon in northern Illinois.
Amer. Jour. Sci. (2), xii, p. 439.
- Lawley, R.** 1875 A
Monografia del genere *Notidamus*.
Pp. 1-34, with pls. i-iv, Firenze, 1875.
This paper appears to have been published
also in Atti Soc. Toscano, iii, 1877.
- Latier and Parieu.** 1839 A
Note sur la machoire d'un carnassier
fossile, nommé *Hyénodon leptorhynchus*.
Ann. Sci. Naturelles, (2), xi, pp. 27-31, with
pl. ii.
- Lea, Isaac.** 1849 A
On reptilian footmarks found in the
gorge of Sharp Mountain, near Potts-
ville, Pa.
Proc. Amer. Phil. Soc., iv, pp. 91-94, with fig.
in text.
Noticed in Amer. Jour. of Sci., vol. ix, pp.
124-125.
Describes *Sauropus primævus*.
- 1850 A
On traces of a fossil reptile (*Sauropus*
primævus) found in the Old Red sand-
stone.
Report Brit. Assoc. Adv. Sci., 19th meeting,
Birmingham, 1849, p. 56.
- 1851 A
Remarks on the bones of a fossil
reptilian quadruped.
Proc. Acad. Nat. Sci. Phila., v, pp. 171-172.
Describes *Clepsysaurus pennsylvanicus*, but
gives no generic name.
- 1851 B
Remarks on *Clepsysaurus pennsylvani-*
cus.
Proc. Acad. Nat. Sci. Phila., v, p. 205.
The generic name is here first given.
- 1852 A
On the fossil footmarks in the red
sandstones of Pottsville, Schuylkill
County, Pa.
Trans. Amer. Philos. Soc., x, pp. 307-317, pls.
xxxi-xxxiii.
- 1853 A
Description of a fossil saurian of the
New Red sandstone formation of Penn-
sylvania.
Jour. Acad. Nat. Sci. Phila. (2), pp. 185-202,
pls. xvii-xix.
Description of *Clepsysaurus pennsylvanicus*.

Laiyer

Lea, Isaac—Continued. 1853 B

On some new fossil molluscs in the Carboniferous slates of the anthracite seams of the Wilkesbarre coal formation.

Jour. Acad. Nat. Sci. Phila. (2), ii, pp. 203-206, with pl. xx.

Contains, on p. 206, with pl. xx, figs. 4, 5, a description of *Palæoniscus ? leidyiana*.

1855 A

Fossil footmarks in the red sandstone of Pottsville, Pa.

Philadelphia, 1855, pp. 1-16, with 1 pl. Elephant folio.

Contains plate showing tracks of *Sauropus primævus* of the natural size.

1856 A

[Description of *Centemodon sulcatus*.]

Proc. Acad. Nat. Sci. Phila., 1856, p. 77-78.

1856 B

Reptilian remains in the New Red sandstone of Pennsylvania.

Amer. Jour. Sci. (2), xxii, pp. 122-124.

Repeated on pp. 422-423, same volume. From Proc. Acad. Nat. Sci. Phila., viii, 1856, p. 77.

1858 A

[Remarks respecting *Clepsysaurus* and *Bathynathus borealis*.]

Proc. Acad. Nat. Sci. Phila., 1858, pp. 90-92.

Leboucq, H. 1887 A

La nageoire pectorale des Cétacés au point de vue phylogénique.

Anatom. Anzeiger, ii, pp. 202-208.

1888 A

Über das Fingerskelett der Pinnipedier und der Cetaceen.

Anatom. Anzeiger, iii, pp. 530-534.

Also in Verhandl. Anat. Gesellschaft, 1888, pp. 40-44.

1896 A

Ueber Hyperphalangie bei den Säugthieren.

Anatom. Anzeiger, xii, Ergänzungsheft, pp. 174-176.

Leche, W. 1877 A

Studien über das Milchgebiss und die Zahnhomologien bei den *Chiroptera*.

Archiv Naturgesch., xliii, i, pp. 353-364.

1880 A

Zur Morphologie der Beckenregion bei *Insectivora*.

Morpholog. Jahrbuch, vi, pp. 597-602.

1893 A

Studien über die Entwicklung des Zahnsystems bei den Säugthieren.

Morpholog. Jahrbuch, xix, pp. 502-547, with 20 text figs.

Abstract in Zoological Record for 1893, Mamm., p. 8.

Leche, W.—Continued. 1893 B

Nachträge zu Studien über die Entwicklung des Zahnsystems bei der Säugthieren.

Morpholog. Jahrbuch, xx, pp. 113-142, with 12 figs. in the text.

1895 A

Zur Entwicklungsgeschichte des Zahnsystems der Säugthiere, zugleich ein Beitrag zur Stammesgeschichte dieser Thiergruppe. I. Theil. Ontogenie.

Bibliotheca Zoologica, Heft 17, pp. 1-160, with 19 pls. and 20 text figs. Stuttgart, 1895.

Pp. 157-160 of this important work are occupied by a list of the authorities which the author has cited.

Reviewed by Max Fürbringer, Morpholog. Jahrbuch, vol. xxiii, p. 592.

1896 A

Zur Entwicklungsgeschichte des Zahnsystems der Säugthiere, zugleich ein Beitrag zur Stammesgeschichte dieser Gruppe.

Biolog. Centralbl., xvi, pp. 283-296.

1896 B

Die Entwicklung des Zahnsystems der Säugthiere.

Compte rendu des séances du troisième Congres Internat. de Zoologie. Leyden, 1895 pp. 279-289.

1897 A

Zur Morphologie des Zahnsystems der Insectivoren.

Anatom. Anzeiger, xiii, pp. 1-11, with 10 figs. in the text.

1897 B

Zur Morphologie des Zahnsystems der Insectivoren.

Anatom. Anzeiger, xiii, pp. 513-529, with 7 figs. in the text.

1897 C

Untersuchungen über das Zahnsystem lebender und fossiler Halbaffen.

Festschrift zum 70sten Geburtstage von Carl Gegenbaur, iii, pp. 127-166, with pl. i, and 20 figs. in the text.

Le Conte, John L. 1848 A

Notice of five new species of fossil *Mammalia* from Illinois.

Amer. Jour. Sci. (2), v, pp. 102-106, with 3 text figs.

1848 B

On *Platygonus compressus*; a new fossil pachyderm.

Mem. Amer. Acad. Arts and Sciences, iii, pp. 257-274, with pls. i-iv.

1852 A

Notes on some suilline pachyderms from Illinois.

Proc. Acad. Nat. Sci. Phila., vi, pp. 3-5.

- Le Conte, John L.**—Continued. 1852 B
Notice of a fossil *Dicotyles* from Missouri.
Proc. Acad. Nat. Sci. Phila., vi, pp. 5-6.
Describes *D. costatus* LeC.
- 1852 C
[Remarks on *Castoroides ohioensis* from Shawneetown, Illinois.]
Proc. Acad. Nat. Sci. Phila., vi, p. 53.
- 1852 D
Remarks on some fossil pachyderms from Illinois.
Proc. Acad. Nat. Sci. Phila., vi, pp. 56-57.
- Le Conte, Joseph.** 1883 A
Carson footprints.
Nature, xxviii, pp. 101-102.
- Lee, W. T.** 1897 A
[A Mosasauroid from Colorado.]
Amer. Naturalist, xxxi, p. 614.
Said to belong probably to *Chidustes*; no specific name assigned and only a general description.
- Lefèvre, Th.** 1889 A
Note préliminaire sur les restes de Sireniens recueillis en Belgique.
Zoolog. Anzeiger, xii, pp. 197-200.
- Leidy, Joseph.** 1847 A
On the fossil horse of America.
Proc. Acad. Nat. Sci. Phila., iii, pp. 262-266, pl. ii.
Describes *Equus americanus*.
- 1847 B
On a new genus and species of fossil *Ruminantia*: *Poëbrotherium wilsoni*.
Proc. Acad. Nat. Sci. Phila., iii, pp. 322-326.
- 1847 C
[Observations on *Equus americanus*.]
Proc. Acad. Nat. Sci. Phila., iii, p. 328.
- 1848 A
On a new genus and species of fossil *Ruminantia*: *Poëbrotherium wilsoni*.
Amer. Jour. Sci. (2), v, pp. 276-279.
Extracted from Proc. Phil. Acad., Nov. 1847, p. 322. Reprinted in Ann. and Mag. Nat. Hist. (2) ii, pp. 389-392.
- 1848 B
On a new fossil genus and species of ruminantoid *Pachydermata*: *Merycoidodon culbertsonii*.
Proc. Acad. Nat. Sci. Phila., iv, pp. 47-50, with 1 plate of 5 figs.
- 1849 A
Tapirus americanus fossilis.
Proc. Acad. Nat. Sci. Phila., iv, pp. 180-182.
- 1850 A
Observations on two new genera of fossil *Mammalia*, *Eucrotophus jacksoni*, and *Archæotherium mortoni*.
Proc. Acad. Nat. Sci. Phila., v, pp. 90-93.
- Leidy, Joseph**—Continued. 1850 B
Remarks on *Rhinoceros occidentalis*.
Proc. Acad. Nat. Sci. Phila. v, p. 119.
Contains no description.
- 1850 C
Descriptions of *Rhinoceros nebrascensis*, *Agriocheerus antiquus*, *Palæotherium proutii*, and *P. bairdii*.
Proc. Acad. Nat. Sci. Phila., v, pp. 121-122.
- 1851 A
Remarks on *Palæotherium proutii*.
Proc. Acad. Nat. Sci. Phila., v, pp. 170-171.
- 1851 B
[Description of *Stylenmys nebrascensis*.]
Proc. Acad. Nat. Sci. Phila., v, pp. 172-173.
- 1851 C
Descriptions of *Testudo lata* and *Emys hemispherica*.
Proc. Acad. Nat. Sci. Phila., v, p. 173.
- 1851 D
Descriptions of fossil ruminant ungulates from Nebraska.
Proc. Acad. Nat. Sci. Phila., v, pp. 237-239.
Describes *Oreodon priscum* and *Cotylops speciosa*.
- 1851 E
[Remarks on *Oreodon priscus* and *Rhinoceros occidentalis*.]
Proc. Acad. Nat. Sci. Phila., v, p. 276.
- 1851 F
[Descriptions of two fossil species of *Balæna*, *B. palæatlantica* and *B. prisca*.]
Proc. Acad. Nat. Sci. Phila., v, pp. 308-309.
- 1851 G
[Descriptions of a number of fossil reptiles and mammals.]
Proc. Acad. Nat. Sci. Phila., v, pp. 325-328.
- 1851 H
[Descriptions of fossils from the Green-sand of New Jersey.]
Proc. Acad. Nat. Sci. Phila., v, pp. 329-330.
- 1851 I
[Remarks on *Aceratherium*.]
Proc. Acad. Nat. Sci. Phila., v, p. 331.
- 1851 J
[Description of the genus *Arctodon*.]
Proc. Acad. Nat. Sci. Phila., v, p. 278.
No specific name is indicated for the teeth described.
- 1851 K
Fossil bones from Big Bone Lick, Kentucky.
Proc. Acad. Nat. Sci. Phila., v, p. 140.
- 1852 A
[Description of a new rhinoceros from Nebraska, *R. americanus*.]
Proc. Acad. Nat. Sci. Phila., vi, p. 2.

Leidy, Joseph—Continued. 1852 B
[Descriptions of *Delphinus conradi*
and *Thoracosaurus grandis*.]
Proc. Acad. Nat. Sci. Phila., vi, p. 35.

— 1852 C
[Description of *Pontogeneus priscus*.]
Proc. Acad. Nat. Sci. Phila., vi, p. 52.

— 1852 D
[Description of *Emys culbertsoni*.]
Proc. Acad. Nat. Sci. Phila., vi, p. 34.

— 1852 E
[Remarks on fossil tortoises from
Nebraska.]
Proc. Acad. Nat. Sci. Phila., vi, p. 59.

— 1852 F
[Remarks on two crania of extinct
species of ox.]
Proc. Acad. Nat. Sci. Phila., vi, p. 71.

— 1852 G
[*Tapirus haysii* named.]
Proc. Acad. Nat. Sci. Phila., vi, p. 106.
Name given to tooth presented by Dr. Hays.

— 1852 H
[Remarks on fossil ox and on extinct
Edentata.]
Proc. Acad. Nat. Sci. Phila., vi, p. 117.

— 1852 I
[Remarks on *Tapirus haysii*.]
Proc. Acad. Nat. Sci. Phila., vi, p. 148.

— 1852 J
Description of the remains of extinct
Mammalia and *Chelonia* from Nebraska
Territory, collected during the geolog-
ical survey under the direction of Dr.
D. D. Owen.

David D. Owen's "Report of a geological sur-
vey of Wisconsin, Iowa, and Minnesota and
incidentally a portion of Nebraska Territory,"
pp. 534-572, pls. ix-xv.

— 1852 K
Description of a new species of croco-
dile from the Miocene of Virginia.
Jour. Acad. Nat. Sci. Phila. (2), ii, pp. 135-
138, pls. xvi.

Description of *Crocodylus antiquus* given.

— 1852 L
Report upon some fossil *Mammalia*
and *Chelonia* from Nebraska.

Sixth Annual Report Regents Smithsonian
Institution, for 1851, pp. 63-65.

— 1853 A
Memoir on the extinct species of
American ox.

Smithsonian Contributions to Knowledge,
v, art. 3, pp. 1-20, pls. i-v.

This memoir is said to have been published
in Dec., 1852.

Leidy, Joseph—Continued. 1853 B
[Description of *Ursus amplidens*.]
Proc. Acad. Nat. Sci. Phila., vi, p. 303.

— 1853 C
[Observations on extinct *Cetacea*.]
Proc. Acad. Nat. Sci. Phila., vi, pp. 377-378.

— 1853 D
[Remarks on a collection of fossil
Mammalia from Nebraska.]
Proc. Acad. Nat. Sci. Phila., vi, pp. 392-394.

— 1853 E
Remarks on several fossil teeth.
Proc. Acad. Nat. Sci. Phila., vi, p. 241.

This abstract of remarks contains as names
of new species, *Hipparion venustum*, *Oromys*
æopi, *Eubradys antiquus*, and *Ereptodon priscus*.
No descriptions accompany these names.

— 1853 F
Description of an extinct species of
American lion, *Felis atrox*.

Trans. Amer. Philos. Soc., x, pp. 319-321, pl.
xxxiv.

This species appears to be first mentioned,
without description, in Proc. Amer. Phil. Soc.,
v, 261, 1853.

— 1853 G
A memoir on the extinct *Dicotyles*
of America.

Trans. Amer. Philos. Soc., x, pp. 323-343, pls.
xxxv-xxxviii.

— 1854 A
The ancient fauna of Nebraska, or a
description of remains of extinct *Mam-*
malia and *Chelonia* from the Mauvais
Terres of Nebraska.

Smithsonian Contributions to Knowledge,
vi, art. vii, pp. 1-126, pls. i-xxiv.

— 1854 B
Remarks on extinct saurians from
Arkansas.

Proc. Acad. Nat. Sci. Phila., vii, p. 72, with
pl. ii.

Describes *Brimosaurus grandis*.

— 1854 C
[Remarks on *Sus americanus*, or *Har-*
lanus americanus, and on other extinct
mammals.]

Proc. Acad. Nat. Sci. Phila., vii, pp. 89-90.

— 1854 D
Remarks on a new species of mam-
mal from Nebraska, *Dinictis felina*.

Proc. Acad. Nat. Sci. Phila., vii, p. 127.

Insufficient description.

— 1854 E
Synopsis of extinct *Mammalia*, the
remains of which have been discovered
in the Eocene formations of Nebraska.

Proc. Acad. Nat. Sci. Phila., vii, pp. 156-157.

Leidy, Joseph—Continued. 1854 F

Description of a fossil apparently indicating an extinct species of the camel tribe.

Proc. Acad. Nat. Sci. Phila., vii, pp. 172-173.
Describes *Camelops kansanus*.

1854 G

Remarks on the question of the identity of *Bootherium cavifrons* with *Oribos moschatus* or *O. maximus*.

Proc. Acad. Nat. Sci. Phila., vii, pp. 209-210.

1854 H

On *Bathygnathus borealis*, an extinct saurian of the New Red sandstone of Prince Edward's Island.

Jour. Acad. Nat. Sci. Phila., (2), ii, pp. 327-330, pl. xxxiii.

1854 I

Notice of some fossil bones discovered by Mr. Francis A. Lincke, in the banks of the Ohio River, Indiana.

Proc. Acad. Nat. Sci. Phila., vii, pp. 199-201.

These bones were found below Evansville, Ind., and consisted of *Megalonyx jeffersonii*, *Bison americanus*, *Cervus virginianus*, *Equus americanus*, *Tapirus haysii* and *Canis primævus*.

1855 A

On *Bathygnathus borealis*, an extinct saurian of the New Red sandstone of Prince Edward's Island.

Amer. Jour. Sci. (2), xix, pp. 444-446.

Extracted from the Jour. of the Acad. of Nat. Sci. Phila., vol. ii, and same as Leidy, J. 1854 H.

1855 B

A memoir on the extinct sloth tribe of North America.

Smithsonian Contributions to Knowledge, vii, art. v, pp. 1-68, pls. i-xvi.

1855 C

Indications of twelve species of fossil fishes.

Proc. Acad. Nat. Sci. Phila., vii, pp. 395-397.

1855 D

Indications of five species, with two new genera, of extinct fishes.

Proc. Acad. Nat. Sci. Phila., vii, p. 414.

1856 A

Description of two ichthyodorulites.

Amer. Jour. Sci. (2), xxi, pp. 421-422.

From Proc. Acad. Nat. Sci. Phila., vol. viii, p. 11.

1856 B

Notice of some remains of extinct *Mammalia*, recently discovered by Dr.

Leidy, Joseph—Continued.

F. V. Hayden in the Bad Lands of Nebraska.

Amer. Jour. Sci. (2), xxi, pp. 422-423.

From Proc. Phil. Acad., viii, p. 59; same as Leidy, 1856 D.

1856 C

Notices of remains of extinct reptiles and fishes discovered by Dr. F. V. Hayden in the Bad Lands of the Judith River, Nebraska Territory.

Amer. Jour. Sci. (2), xxii, pp. 118-120.

Extracted from Proc. Phil. Acad. See Leidy, 1856 F.

1856 D

Notice of some remains of extinct *Mammalia*, recently discovered by Dr. F. V. Hayden in the bad lands of Nebraska.

Proc. Acad. Nat. Sci. Phila., viii, p. 59.

Also in Amer. Jour. Sci. (2), xxi, p. 422.

1856 E

Description of two ichthyodorulites.

Proc. Acad. Nat. Sci. Phila., viii, pp. 11-12.

Description of *Stenacanthus nitidus* and *Cylindracanthus ornatus*.

1856 F

Notice of remains of extinct reptiles and fishes, discovered by Dr. F. V. Hayden in the Bad Lands of the Judith River, Nebraska Territory.

Proc. Acad. Nat. Sci. Phila., viii, pp. 72-73.

1856 G

Notice of the remains of a species of extinct seal, from the Post-pliocene deposit of the Ottawa River.

Proc. Acad. Nat. Sci. Phila., viii, pp. 90-91, with pl. iii.

Reprinted in Canadian Naturalist and Geologist, i, p. 238, with pl., 1856.

1856 H

Notices of several genera of extinct *Mammalia*, previously less perfectly characterized.

Proc. Acad. Nat. Sci. Phila., viii, pp. 91-92.

1856 I

Notices of remains of extinct *Mammalia*, discovered by Dr. F. V. Hayden in Nebraska Territory.

Proc. Acad. Nat. Sci. Phila., viii, pp. 88-90.

1856 J

Notice of some remains of extinct vertebrated animals.

Proc. Acad. Nat. Sci. Phila., viii, pp. 163-165.

Leidy, Joseph—Continued 1856 K
 Notices of remains of extinct vertebrate animals of New Jersey, collected by Professor Cook, of the State geological survey, under the direction of Dr. W. Kittell.

Proc. Acad. Nat. Sci. Phila., viii, pp. 220-221.

1856 L
 Notices of extinct vertebrated animals discovered by Prof. E. Emmons.
 Proc. Acad. Nat. Sci. Phila., viii, pp. 255-256.
 See also Amer. Jour. Sci., xxiii, 1857, pp. 271-272.

1856 M
 Notice of some remains of fishes discovered by Dr. John E. Evans.
 Proc. Acad. Nat. Sci. Phila., viii, pp. 256-257.

1856 N
 Notice of remains of two species of seals.
 Proc. Acad. Nat. Sci. Phila., viii, p. 265.

1856 O
 Remarks on certain extinct species of fishes.
 Proc. Acad. Nat. Sci. Phila., viii, pp. 301-302.

1856 P
 Notices of remains of extinct turtles of New Jersey, collected by Professor Cook, of the State geological survey, under the direction of Dr. W. Kittell.
 Proc. Acad. Nat. Sci. Phila., viii, pp. 303-304.

1856 Q
 Notices of extinct *Vertebrata* discovered by Dr. F. V. Hayden, during the expedition to the Sioux country under the command of Lieut. G. K. Warren.
 Proc. Acad. Nat. Sci. Phila., viii, pp. 311-312.

1856 R
 [Remarks on extinct *Dicotylinae*.]
 Proc. Acad. Nat. Sci. Phila., 1856, p. 140.

1856 S
 Descriptions of some remains of fishes from the Carboniferous and Devonian formations of the United States.
 Jour. Acad. Nat. Sci. Phila. (2), iii, pp. 159-160.

1856 T
 Description of some remains of extinct *Mammalia*.
 Jour. Acad. Nat. Sci. Phila. (2), iii, pp. 166-171, pl. 17.
 Describes *Camelops kansanus*, *Canis primævus*, *Usus amplexidens*, *Procyon priscus* and *Anomodon snyderi*.

Leidy, Joseph—Continued. 1857 A
 Notices of remains of extinct vertebrated animals discovered by Prof. E. Emmons.
 Amer. Jour. Sci. (2), xxiii, pp. 271-272.
 From Proc. Phila. Acad. Nat. Sci., viii, p. 255.

1857 B
 [Remarks on *Dromatherium*, *Clepsy-saurus*, *Omosaurus*, etc.]
 Proc. Acad. Nat. Sci. Phila., ix, pp. 149-150.

1857 C
 List of extinct *Vertebrata*, the remains of which have been discovered in the region of the Missouri River, with remarks on their geological age.
 Proc. Acad. Nat. Sci. Phila., ix, pp. 89-91.

1857 D
 Rectification of the references of certain of the extinct mammalian genera of Nebraska.
 Proc. Acad. Nat. Sci. Phila., ix, pp. 175-176.

1857 E
 [Remarks on *Mosasaurus*.]
 Proc. Acad. Nat. Sci. Phila., ix, p. 176.

1857 F
 Notices of some remains of extinct fishes.
 Proc. Acad. Nat. Sci. Phila., 1857, pp. 167-168.

1857 G
 Notice of remains of the walrus discovered on the coast of the United States.
 Trans. Amer. Philos. Soc., xi, pp. 83-86, with pl. 4, figs. 1, 2, and pl. 5, fig. 1.

1857 H
 Descriptions of the remains of fishes from the Carboniferous limestone of Illinois and Missouri.
 Trans. Amer. Philos. Soc., xi, pp. 87-90, pl. 5, figs. 2-29.

1857 I
 Remarks on *Saurocephalus* and its allies.
 Trans. Amer. Philos. Soc., xi, pp. 91-95, with pl. vi, figs. 8-15.

1857 J
 Observations on the extinct peccary of North America; being a sequel to "A memoir on the extinct *Dicotylinae* of America."
 Trans. Amer. Philos. Soc., xi, pp. 97-105, with pl. vi, figs. 2-7.

Leidy, Joseph—Continued. 1857 K
Remarks on the structure of the feet
of *Megalonyx*.
Trans. Amer. Philos. Soc., xi, pp. 107-108, pl.
vi, fig. 1.

1858 A
[Remarks concerning *Hadrosaurus*.]
Proc. Acad. Nat. Sci. Phila., 1858, pp. 215-
218.

1858 B
[Descriptions of *Mastodon mirificus*
and *Elephas imperator*.]
Proc. Acad. Nat. Sci. Phila., 1858, p. 10.

1858 C
[Notice of fossil *Mammalia* from val-
ley of Niobrara River.]
Proc. Acad. Nat. Sci. Phila., 1858, p. 11.

1858 D
[Remarks on "*Mastodon longirostris*"
and "*Tapirus mastodontoides*" of Har-
lan.]
Proc. Acad. Nat. Sci. Phila., 1858, p. 12.

1858 E
Notice of remains of extinct *Verte-
brata*, from the valley of the Niobrara
River, collected during the exploring
expedition of 1857, in Nebraska, under
the command of Lieut. G. K. Warren,
U. S. Top. Eng., by Dr. F. V. Hayden.
Proc. Acad. Nat. Sci. Phila., 1858, p. 20-29.

1858 F
[Description of *Procamelus robustus*
and *P. gracilis*.]
Proc. Acad. Nat. Sci. Phila., 1858, p. 89.

1859 A
Hadrosaurus foulkii, a new saurian
from the Cretaceous of New Jersey, re-
lated to the Iguanodon.
Amer. Jour. Sci. (2), xxvii, pp. 266-270.
From Proc. Phil. Acad., 1858, p. 218.

1859 B
[Remarks on remains of some extinct
Vertebrata in Territory of Nebraska.]
Proc. Amer. Philos. Soc., vii, pp. 10-11.

1859 C
[Descriptions of *Xystracanthus arcua-
tus* and *Cladodus occidentalis*."]
Proc. Acad. Nat. Sci. Phila., 1859, p. 3.

1859 D
Synonymy of the American *Mosa-
saurus*.
Proc. Acad. Nat. Sci. Phila., 1859, pp. 91-92.
Preceded by remarks on mastodon found in
Honduras and on the genus *Mosasaurus*.

Leidy, Joseph—Continued. 1859 E
[Remarks on fossil vertebrates found
near Phoenixville, Pa., including new
genus and species, *Eurydorus serridens*.]
Proc. Acad. Nat. Sci. Phila., 1859, p. 110.

1859 F
[On the occurrence of *Ursus ameri-
canus* in association with bones of *Ma-
stodon*, *Megalonyx*, etc.]
Proc. Acad. Nat. Sci. Phila., 1859, p. 111.

1859 G
[Remarks on *Dromatherium sylvestre*
and *Ontocetus emmonsii*.]
Proc. Acad. Nat. Sci. Phila., 1859, p. 162.

1859 H
[Remarks on finding antler of rein-
deer at Sing Sing, N. Y.]
Proc. Acad. Nat. Sci. Phila., 1859, p. 194.

1859 I
Remarks on fossils from Bethany,
Va.; and also from the Green-sand,
Monmouth County, N. J.
Proc. Acad. Nat. Sci. Phila., xi, p. 110.
No descriptions are given and no species are
named.

1860 A
Extinct *Vertebrata* from the Judith
River and great Lignite formations of
Nebraska.
Trans. Amer. Philos. Soc., xi, pp. 139-154,
with pls. viii-xi.

1860 B
Description of vertebrate fossils.
Holmes's Post-pliocene Fossils of South
Carolina, pp. 99-122, with pls. xv-xxviii.

1860 C
Skull of extinct peccary.
Proc. Acad. Nat. Sci. Phila., 1860, p. 416.
This refers to the species found in Gibson
County, Ind., and afterwards called *Dicotyles*
nasutus.

1862 A
Observations upon the mammalian
remains found in the crevices of the
lead-bearing rocks at Galena, Ill.
J. D. Whitney's Report of a Geol. Surv. of
the Upper Mississippi lead region, p. 423.

1865 A
Memoir on the extinct reptiles of the
Cretaceous formations of the United
States.
Smithsonian Contributions to Knowledge,
xiv, article vi, pp. 1-135, pls. i-xx.
Reviewed in the Geol. Magazine, vol. v,
1868, p. 432.

Leidy, Joseph—Continued. 1865 B
[Descriptions of *Rhinoceros meridianus*
and *R. hesperius*.]

Proc. Acad. Nat. Sci. Phila., 1865, pp. 176-177.

1865 C

Bones and teeth of horses from California and Oregon.

Proc. Acad. Nat. Sci. Phila., 1865, p. 94.

Describes *Equus occidentalis* Leidy.

1865 D

Brief review of a memoir on the Cretaceous reptiles of the United States, published in the fourteenth volume of the Smithsonian Contributions to Knowledge.

Annual Rep. Board Regents Smithsonian Inst. for 1864, pp. 66-73.

This is a review of the same author's memoir referred to in the title, Leidy, J. 1865 A.

1866 A

Drepanodon (*Machairodus*) *occidentalis*.

Proc. Acad. Nat. Sci. Phila., 1866, p. 345.

This carnivore from White River is named, but not described.

1866 B

Remarks on fossils presented.

Proc. Acad. Nat. Sci. Phila., xviii, p. 237.

Remarks on Harlan's *Scelopax* and on bird tibia from Nebraska.

1866 C

Remarks on a phalanx of an extinct reptile.

Proc. Acad. Nat. Sci. Phila., xviii, p. 9.

Reference made to a reptilian phalanx from Columbus, Miss. Description given, but no name. May belong to *Hadrosaurus*.

1867 A

[Remarks on a skull of *Bison antiquus* from California.]

Proc. Acad. Nat. Sci. Phila., 1867, p. 85.

1867 B

[Remarks on fossil skull of *Geomys bursarius*.]

Proc. Acad. Nat. Sci. Phila., 1867, p. 97.

1867 C

[Remarks on a skull of *Castoroides ohioensis*, found near Charleston, Ill.]

Proc. Acad. Nat. Sci. Phila., 1867, pp. 97-98.

1867 D

[Remarks on *Agriochærus latifrons*, *Hippopotamus*, and *Mastodon*.]

Proc. Acad. Nat. Sci. Phila., 1867, p. 32.

The name *Agriochærus latifrons* is given, but there is no description.

Leidy, Joseph—Continued. 1868 A
Notice of some vertebrate remains from Hardin County, Tex.

Proc. Acad. Nat. Sci. Phila., 1868, pp. 174-176.

1868 B

Indications of an *Elotherium* in California.

Proc. Acad. Nat. Sci. Phila., 1868, p. 177.

Describes *Elotherium superbum*.

1868 C

Notice of some reptilian remains from Nevada.

Proc. Acad. Nat. Sci. Phila., 1868, pp. 177-178.

1868 D

Notice of some remains of horses.

Proc. Acad. Nat. Sci. Phila., 1868, p. 195.

1868 E

Notice of some extinct cetaceans.

Proc. Acad. Nat. Sci. Phila., 1868, pp. 196-197.

1868 F

Remarks on a jaw fragment of *Megalosaurus*.

Proc. Acad. Nat. Sci. Phila., 1868, pp. 197-200.

1868 G

Remarks on *Conosaurus* of Gibbes.

Proc. Acad. Nat. Sci. Phila., 1868, pp. 200-202.

1868 H

Notice of American species of *Ptychodus*.

Proc. Acad. Nat. Sci. Phila., 1868, pp. 205-208.

1868 I

Notice of some remains of extinct pachyderms.

Proc. Acad. Nat. Sci. Phila., 1868, pp. 230-233.

1868 J

Notice of some remains of extinct *Insectivora* from Dakota.

Proc. Acad. Nat. Sci. Phila., 1868, pp. 315-316.

1869 A

The extinct mammalian fauna of Dakota and Nebraska, including an account of some allied forms from other localities, together with a synopsis of the mammalian remains of North America.

Jour. Acad. Nat. Sci. Phila. (2), vii, pp. 1-472, with 30 plates.

A synopsis of this memoir was published in Jour. de Zoologie, i, 1872, pp. 187-191; 500-508, with pls. x-xi; ii, pp. 541-545. A list of the described genera and species is included.

Leidy, Joseph—Continued. 1869 B
Notice of some extinct vertebrates
from Wyoming and Dakota.

Proc. Acad. Nat. Sci. Phila., 1869, pp. 63-67.

1870 A

On the *Elasmosaurus platyurus* of
Cope.

Amer. Jour. Sci. (2), xlix, p. 392.

1870 B

On *Discosaurus* and its allies.

Amer. Jour. Sci. (2), 1, pp. 139-140.

Extracted from Proc. Phil. Acad., 1870, p. 18.

1870 C

[Abstract of remarks made on *Elas-
mosaurus* at meetings of Acad. Nat. Sci.
Phila., Mar. 8 and Apr. 5, 1870.]

Nature, ii, p. 249.

1870 D

[Description of new genus and
species, *Megacerops coloradensis*.]

Proc. Acad. Nat. Sci. Phila., 1870, pp. 1-2.

1870 E

[Remarks on *Poicilopleuron valens*,
Clidastes intermedius, *Leiodon proriger*,
Baptlemys wyomingensis, and *Emys steven-
sonianus*.]

Proc. Acad. Nat. Sci. Phila., 1870, pp. 3-5.

1870 F

[Remarks on *Mylodon ? robustus*, from
Central America, and on *Dromatherium
sylvestre*.]

Proc. Acad. Nat. Sci. Phila., 1870, pp. 8-9.

1870 G

[Remarks on *Elasmosaurus platyurus*
and other fossil vertebrates.]

Proc. Acad. Nat. Sci. Phila., 1870, pp. 9-11.

1870 H

[Remarks on ichthyodorulites and on
certain fossil *Mammalia*.]

Proc. Acad. Nat. Sci. Phila., 1870, pp. 12-13.

1870 I

Remarks on *Discosaurus* and its allies.

Proc. Acad. Nat. Sci. Phila., 1870, pp. 18-22.

1870 J

[Remarks on fossil vertebrates.]

Proc. Acad. Nat. Sci. Phila., 1870, pp. 66-68.

1870 K

[Remarks on *Elephas americanus* and
Bos americanus from Kansas and on
new cyprinoid fishes from the Rocky
Mountain region.]

Proc. Acad. Nat. Sci. Phila., 1870, pp. 69-71.

1870 L

[Remarks on jaw of *Oribos cavifrons*.]

Proc. Acad. Nat. Sci. Phila., 1870, p. 73.

Leidy, Joseph—Continued. 1870 M
[Remarks on *Mastodon americanus*,
etc.]

Proc. Acad. Nat. Sci. Phila., 1870, pp. 96-99.

1870 N

[Description of *Crocodylus elliotti*.]

Proc. Acad. Nat. Sci. Phila., 1870, p. 100.

1870 O

[Remarks on a collection of fossils
from the western Territories.]

Proc. Acad. Nat. Sci. Phila., 1870, pp. 109-110.

1870 P

[Remarks on a collection of fossils
from Dalles City, Oreg.]

Proc. Acad. Nat. Sci. Phila., 1870, pp. 111-113.

1870 Q

[Descriptions of *Palæosyops paludosus*,
Microsus cuspidatus, and *Notharctos tene-
brosus*.]

Proc. Acad. Nat. Sci. Phila., 1870, pp. 111-114.

1870 R

[Description of *Graphiodon vinearis*
and remarks on *Crocodylus elliotti*.]

Proc. Acad. Nat. Sci. Phila., 1870, p. 122.

1870 S

[Descriptions of *Emys jeansesi*, *E.
haydeni*, *Baëna arenosa*, and *Saniwa
sidens*.]

Proc. Acad. Nat. Sci. Phila., 1870, pp. 123-124.

1870 T

[Remarks on a collection of fossils
from Table Mountain, Cal.]

Proc. Acad. Nat. Sci. Phila., 1870, pp. 125-127.

1870 U

[Description of *Nothosaurops occi-
dus*.]

Proc. Acad. Nat. Sci. Phila., 1870, p. 74.

1870 V

On fossil bones from Dakota and Ne-
braska.

Proc. Acad. Nat. Sci. Phila., 1870, pp. 65-66.

Describes a radius and tibia of some unde-
termined rhinoceros, and records finding of a
bone probably belonging to *Elurodon ferox*.

1870 W

Remarks on Professor Owen's paper
on fossil equines from Central and South
America.

Proc. Acad. Nat. Sci. Phila., 1870, pp. 126-127.
Contains a list of species of *Protohippus*.

1871 A

Notes on the American mastodon and
other fossils.

Amer. Jour. Sci. (3), i, pp. 63-65.

Extracted from Proc. Acad. Nat. Sci. Phila.
1870, pp. 96-99.

Leidy, Joseph—Continued. 1871 B
Remarks on fossil vertebrates from Wyoming.
Amer. Jour. Sci. (3), ii, pp. 372-373.
Extracted from Proc. Acad. Nat. Sci. Phila., Aug. 8, 1871.

1871 C
Report on the vertebrate fossils of the Tertiary formations of the West.
U. S. Geol. Surv. of Wyoming and portions of contiguous Territories, 2d (4th) annual report, F. V. Hayden, U. S. Geologist, pp. 340-370.

1871 D
[Remarks on a collection of fossils from California.]
Proc. Acad. Nat. Sci. Phila., 1871, p. 50.

1871 E
[Remarks on extinct turtles from Wyoming Territory, *Anosteira ornata* and *Hybemys arenarius*.]
Proc. Acad. Nat. Sci. Phila., 1871, pp. 102-103.

1871 F
[Remarks on *Mastodon* and *Equus* from N. Carolina, and on extinct mammals from Wyoming.]
Proc. Acad. Nat. Sci. Phila., 1871, pp. 113-116.

1871 G
[Remarks on remains of *Palæosyops*.]
Proc. Acad. Nat. Sci. Phila., 1871, p. 118.

1871 H
Remarks on a fossil *Testudo* from Wyoming and on supposed fossil turtle eggs.
Proc. Acad. Nat. Sci. Phila., 1871, pp. 154-155.

1871 I
Remarks on donation of fossils from Wyoming.
Proc. Acad. Nat. Sci. Phila., 1871, p. 197.

1871 J
Remarks on *Mastodon*, etc., of California; and note on *Anchitherium*.
Proc. Acad. Nat. Sci. Phila., 1871, pp. 198-199.

1871 K
Remarks on fossil vertebrates from Wyoming.
Proc. Acad. Nat. Sci. Phila., 1871, pp. 228-229.
See Amer. Naturalist, v, pp. 664-666.

1871 L
Notice of some extinct rodents.
Proc. Acad. Nat. Sci. Phila., 1871, pp. 230-232.

1871 M
Remarks on fossils from Oregon.
Proc. Acad. Nat. Sci. Phila., 1871, pp. 247-248.

Leidy, Joseph—Continued. 1872 A
On some new species of fossil *Mammalia* from Wyoming.
Amer. Jour. Sci. (3), iv, pp. 239-240.
From Proc. Acad. Nat. Sci. Phila. Same as Leidy, 1872 G.

1872 B
On the fossil vertebrates of the early Tertiary formation of Wyoming.
U. S. Geol. Surv. of Montana and portions of adjacent Territories; F. V. Hayden, U. S. Geologist, Washington, D. C., 1872, pp. 353-372.

1872 C
Remarks on fossils from Wyoming.
Proc. Acad. Nat. Sci. Phila., 1872, pp. 19-21.

1872 D
Remarks on some extinct mammals.
Proc. Acad. Nat. Sci. Phila., 1872, pp. 37-38.

1872 E
Remarks on some extinct vertebrates.
Proc. Acad. Nat. Sci. Phila., 1872, pp. 38-40.
Descriptions given of *Felis augustus*, *Oligosimus grandævus*, and *Tylosteus ornatus*.

1872 F
Remarks on fossil shark teeth.
Proc. Acad. Nat. Sci. Phila., 1872, p. 166.

1872 G
On some new species of *Mammalia* from Wyoming.
Proc. Acad. Nat. Sci. Phila., 1872, pp. 167-169.

1872 H
Remarks on fossil mammals from Wyoming.
Proc. Acad. Nat. Sci. Phila., 1872, pp. 240-242.

1872 I
Notice of donation of fossils, etc., from Wyoming.
Proc. Acad. Nat. Sci. Phila., 1872, pp. 267-268.

1872 J
Remarks on fossils from Wyoming.
Proc. Acad. Nat. Sci. Phila., 1872, p. 277.
Remarks on *Palæosyops junior*, *Uintacyon edax*, *U. vorax*, *Chameleo pristinus*.

1872 K
Remarks on *Mastodon* from New Mexico.
Proc. Acad. Nat. Sci. Phila., 1872, p. 143.

1872 L
On a new genus of extinct turtles.
Proc. Acad. Nat. Sci. Phila., 1872, p. 162.
New genus *Chisternon* formed for *Baëna undata* Leidy.

1872 M
On some remains of Cretaceous fishes.
Proc. Acad. Nat. Sci. Phila., 1872, pp. 162-163.
Descriptions given of *Otodus divaricatus*, *Oxyrhina extenta*, *Acrodus humilis*, and *Pycnodus faba*.

- Leidy, Joseph—Continued.** 1873 A
Notice of fossil *Vertebrata* from the Miocene of Virginia.
Amer. Jour. Sci. (3), v, pp. 311-312.
Extract from Proc. Acad. Nat. Sci. Phila., 1872.
- 1873 B
Contributions to the extinct vertebrate fauna of the Western Territories.
Report of the U. S. Geological Survey of the Territories, F. V. Hayden, U. S. geologist in charge, i, pp. 14-358; pls. i-xxxvii. Washington, 1873.
- 1873 C
Notice of fossil vertebrates from the Miocene of Virginia.
Proc. Acad. Nat. Sci. Phila., 1873, p. 15.
- 1873 D
Notice of remains of fishes in the Bridger Tertiary formation of Wyoming.
Proc. Acad. Nat. Sci. Phila., 1873, pp. 97-99.
- 1873 E
Remarks on the occurrence of an extinct hog in America.
Proc. Acad. Nat. Sci. Phila., 1873, p. 207.
- 1873 F
Remarks on extinct mammals from California.
Proc. Acad. Nat. Sci. Phila., 1873, pp. 259-260.
Describes *Felis imperialis* and *Auchenia hesternus*.
- 1873 G
Remarks on fossil elephant teeth.
Proc. Acad. Nat. Sci. Phila., 1873, pp. 416-417.
- 1874 A
[Remarks on *Thespesius* and *Ischyrotherium*.]
Proc. Acad. Nat. Sci. Phila., 1874, pp. 74-75.
- 1874 B
Notice of remains of *Titanotherium*.
Proc. Acad. Nat. Sci. Phila., 1874, pp. 165-166.
- 1874 C
Remarks on fossils presented.
Proc. Acad. Nat. Sci. Phila., 1874, pp. 223-224.
- 1875 A
Remarks on elephant remains.
Proc. Acad. Nat. Sci. Phila., 1875, p. 121.
- 1876 A
Remarks on fossils from the Ashley phosphate beds.
Proc. Acad. Nat. Sci. Phila., 1876, pp. 80-81.
Abstract in Amer. Jour. Sci. (3), xii, 222-223.
- Leidy, Joseph—Continued.** 1876 B
Fish remains of the Mesozoic red shales.
Amer. Jour. Sci. (3), xii, p. 223.
Extracted from Proc. Acad. Nat. Sci. Phila., 1876. Same as Leidy, 1876 D.
- 1876 C
On *Petalodus*.
Proc. Acad. Nat. Sci. Phila., 1876, p. 9.
Form related to *P. linguifer* found apparently in Green-sand marl.
- 1876 D
Fish remains of the Mesozoic red shales.
Proc. Acad. Nat. Sci. Phila., 1876, p. 81.
Reprinted in Amer. Jour. Sci., xii, p. 223.
- 1876 E
Remarks on fossils of the Ashley phosphate beds.
Proc. Acad. Nat. Sci. Phila., 1876, pp. 86-87.
- 1876 F
Remarks on vertebrate fossils from the phosphate beds of South Carolina.
Proc. Acad. Nat. Sci. Phila., 1876 pp. 114-115.
- 1877 A
Description of vertebrate remains, chiefly from the phosphate beds of South Carolina.
Jour. Acad. Nat. Sci. Phila. (2), viii, pp. 209-261, pls. xxx-xxxiv.
- 1879 A
Fossil remains of a caribou.
Proc. Acad. Nat. Sci. Phila., 1879, pp. 32-33.
- 1879 B
Fossil foot tracks of the anthracite Coal-measures.
Proc. Acad. Nat. Sci. Phila., 1879, pp. 164-165.
- 1880 A
Bone caves of Pennsylvania.
Proc. Acad. Nat. Sci. Phila., 1880, pp. 346-349.
- 1881 A
Remarks on *Bathygnathus borealis*.
Jour. Acad. Nat. Sci. Phila. (2), viii, pp. 449-451.
- 1882 A
On an extinct peccary.
Proc. Acad. Nat. Sci. Phila., 1882, pp. 301-302.
Describes *Platygonus vetus*.
- 1884 A
Fossil bones from Louisiana.
Proc. Acad. Nat. Sci. Phila., 1884, p. 22.
- 1884 B
Vertebrate fossils from Florida.
Proc. Acad. Nat. Sci. Phila., 1884, pp. 118-119

- Leidy, Joseph—Continued.** 1885 A
Rhinoceros and *Hippotherium* from Florida.
 Proc. Acad. Nat. Sci. Phila., 1885, pp. 32-33.
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- 1885 B
 Remarks on *Mylodon*.
 Proc. Acad. Nat. Sci. Phila., 1885, pp. 49-51, with 6 figs. in the text.
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- 1886 A
 An extinct boar from Florida.
 Proc. Acad. Nat. Sci. Phila., 1886, pp. 37-38, with 2 figs. in the text.
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- 1886 B
 Mastodon and llama from Florida.
 Proc. Acad. Nat. Sci. Phila., 1886, pp. 11-12.
 A notice of this paper, together with a note by Professor Cope, is found in Amer. Naturalist, 1886, xx, p. 755.
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- 1886 C
 Caries in the mastodon.
 Proc. Acad. Nat. Sci. Phila., 1886, p. 38.
-
- 1887 A
 Fossil bones from Florida.
 Proc. Acad. Nat. Sci. Phila., 1887, pp. 309-310.
-
- 1888 A
 On a fossil of the puma.
 Proc. Acad. Nat. Sci. Phila., 1888, pp. 9-10.
-
- 1888 B
Toxodon and other remains from Nicaragua, Central America.
 Proc. Acad. Nat. Sci. Phila., 1888, pp. 275-277, with text figs.
-
- 1889 A
 The saber-tooth tiger of Florida.
 Proc. Acad. Nat. Sci. Phila., 1889, pp. 29-31.
 Describes *Drepanodon floridanus*, and notes occurrence of *Auchenia minor*.
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- 1889 B
 Fossil vertebrates from Florida.
 Proc. Acad. Nat. Sci. Phila., 1889, pp. 96-97.
-
- 1889 C
 Notice of some fossil human bones.
 Trans. Wagner Free Institute Sci., Phila., ii, pp. 9-12.
 Contains a notice of the finding of some human bones in Florida, and also some bones of *Bison latifrons*.
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- 1889 D
 Description of mammalian remains from a rock crevice in Florida.
 Trans. Wagner Free Institute Sci., Phila., ii, pp. 13-17, with pl. iii, figs. 1, 5-9.
-
- 1889 E
 Description of vertebrate remains from Peace Creek, Florida.
 Trans. Wagner Free Institute Sci., Phila., ii, pp. 19-31, with pls. iv-viii.

- Leidy, Joseph—Continued.** 1889 F
 Notice of some mammalian remains from the salt mine of Petite Anse, Louisiana.
 Trans. Wagner Free Institute Sci., Phila., ii, pp. 33-40, with pl. v, figs. 1-4, and 9 figs. in the text.
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- 1889 G
 On *Platygonus*, an extinct genus allied to the peccaries.
 Trans. Wagner Free Institute Sci., Phila., ii, pp. 41-50, with pl. viii, fig. 1.
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- 1889 II
 Notice and description of fossils in caves and crevices of the limestone rocks of Pennsylvania.
 Ann. Report Geol. Surv. Penn. for 1887, pp. 1-20, with pls. i, ii.
-
- 1890 A
Hippotherium and *Rhinoceros* from Florida.
 Proc. Acad. Nat. Sci. Phila., 1890, pp. 182-183, with 1 fig. in the text.
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- 1890 B
 Mastodon and capybara of South Carolina.
 Proc. Acad. Nat. Sci. Phila., 1890, pp. 184-185.
-
- 1890 C
 Fossil vertebrates from Florida.
 Proc. Acad. Nat. Sci. Phila., 1890, pp. 64-65.
-
- 1892 A
 [List of *Vertebrata* from the Pliocene beds of Florida.]
 Bull. U. S. Geol. Surv., No. 84 (Correlation papers: Neocene), pp. 129-130.
- Leidy, Joseph, and Lucas, Fred. A.**
- 1896 A
 Fossil vertebrates from the Alachua clays of Florida; by Joseph Leidy, M. D., LL. D.; edited by Frederic A. Lucas.
 Trans. Wagner Free Institute Sci., Phila., iv, pp. vii-xiv, 15-61, with pls. i-xix.
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- Lemoine, Victor.** 1878 A
 Recherches sur les ossements fossiles des terrains tertiaires inférieurs des environs de Reims. I. Étude du genre *Arctocyon*.
 Annales Sci. Naturelles, Zool. (6), viii, pp. 1-56, pls. 1-4.
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- 1880 A
 Sur les ossements fossiles des terrains tertiaires inférieurs des environs de Reims.
 Assoc. Française pour l'avancement des Sciences, 8^e session, Montpellier, 1879, pp. 585-594.

- Lemoine, Victor**—Continued. 1882 A
 Sur deux *Plagiaulax* tertiaires, recueillis aux environs de Reims.
 Comptes rend. Acad. Sci. Paris, xcv, pp. 1009-1011.
- 1882 B
 Sur l'encéphale de l' *Arctocyon dueilli* et du *Pleuraspidothierium aumonieri*, mammifères de l'Éocène inférieur des environs de Reims.
 Bull. Soc. Géol. France (3), x, pp. 328-333.
- 1883 A
 Étude sur le *Neoplagiaulax* de la faune Éocène inférieur des environs de Reims.
 Bull. Soc. Géol. France (3), xi, pp. 249-271, with pls. v, vi.
- 1884 A
 Du Simœdosaure, reptile de la faune cernaysienne des environs de Reims.
 Comptes rend. Acad. Sci. Paris, xcvi, pp. 697-699.
- 1884 B
 Sur les os de la tête et sur les diverses espèces du Simœdosaure, reptile de la faune cernaysienne des environs de Reims.
 Comptes rend. Acad. Sci. Paris, xcvi, pp. 1011-1013.
- 1885 A
 Sur la présence du Simœdosaure dans les couches éocènes inférieures de Sézanne.
 Bull. Soc. Géol. France (3), xiv, pp. 21-32, pls. iii-v.
- 1885 B
 Sur les analogies et les différences du genre Simœdosaure, de la faune cernaysienne des environs de Reims, avec le genre Champsoosaure d'Erquelines.
 Comptes rend. Acad. Sci. Paris, c, pp. 753-755.
- 1890 A
 Sur les rapports qui paraissent exister entre les mammifères crétacés d'Amérique et les mammifères de la faune cernaysienne des environs de Reims.
 Comptes rend. Acad. Sci. Paris, cx, pp. 480-482.
 See also Bull. Soc. Géol. France (3), xviii, pp. 321-324, pl. iii.
- 1891 A
 Étude d'ensemble sur les dents des mammifères fossiles des environs de Reims.
 Bull. Soc. Géol. France (3), xix, pp. 263-290, with pls. x and xi.

- Lemoine, Victor**—Continued. 1893 A
 Étude sur les os du pied des mammifères de la faune cernaysienne et sur quelques pièces osseuses nouvelles de cet horizon paléontologique.
 Bull. Soc. Géol. France (3), xxi, pp. 353-368, pls. ix-xi.
- Lenk, H.**
 See **Felix and Lenk.**
- Lennox, T. H.** 1886 A
 The fossil sharks of the Devonian.
 Proc. Canadian Institute (3), iii, pp. 120-121.
 Makes statement of the finding of a fossil fin-spine, *Machæracanthus sulcatus*, at St. Marys, Ontario.
- Lepsius, G. R.** 1881 A
Halitherium schinzi, die fossile Sirene des Mainzer Beckens. Eine vergleichend-anatomische Studie.
 Abhandl. mittelh. geol. Vereins, i, pp. i-vi; 1-200; i-viii, with pls. i-x.
 Contains numerous references to the literature of the *Trichechida*.
- Lesley, J. P.** 1889 A
 A dictionary of the fossils of Pennsylvania and neighboring States named in reports and catalogues of the survey. Compiled for the convenience of the citizens of the State by J. P. Lesley, State geologist. 3,000 figures, mostly facsimile copies of those published by H. D. Rogers, Hall, Conrad, Vanuxem, Emmons, Logan, Dawson, Billings, Matthews, Hitchcock, Newberry, Meek, Collett, Worthen, Rominger, D. D. Owen, Cox, Lyon, Safford, Fontaine, Lesquereux, Walcott, Leidy, Cope, and others; and some new species drawn and described by G. B. Simpson.
 Geol. Surv. of Pennsylvania, Report, P₄, 1889. Vol. i, pp. i-xiv; 1-437; with Errata, pp. i-xxx, and list of publications, pp. 1-10. Vol. ii, pp. 439-914; with additions, corrections, synonyms, etc., pp. i-x.
- 1890 A
 [Same title as the preceding, of which it is the conclusion.]
 Pp. 915-1283, with critical emendations, additions, synonyms, etc., pp. i-xiv.
 The number of pages devoted to corrections of errors found in this work gives an indication of the unsatisfactory manner in which it has been compiled. The figures are usually poorly reproduced.
- 1892 A
 A summary description of the geology of Pennsylvania in three volumes,

Lesley, J. P.—Continued.

with a new geological map of the State, a map and list of bituminous mines, and many page plate illustrations. Vol. II, describing the Upper Silurian and Devonian formations. By J. P. Lesley, State geologist.

4to., pp. i-xxv; 722-1628.

The figures are usually much reduced and poor. The plates do not follow the order of their numbers.

1895 A

[Same title as the preceding. Vol. III, part I, describing the Carboniferous formation.]

Pp. i-xix; 1629-2153, with pls. ccv-cccxcv. Part iii, describing the bituminous coal fields, E. V. d'Inwilliers and the New Red of Bucks and Montgomery counties. Benjamin Lyman. Pp. i-xxiii; 2153-2638, with pls. ccxcvi-dexi.

There being no descriptions in the above-mentioned work of the fossils figured, and many of the figures being very small and indistinct, not all are cited in this Catalogue.

Leuthardt, Franz.

1891 A

Ueber die Reduction der Fingerzahl bei Ungulaten.

Zoolog. Jahrbücher, System., v, pp. 93-146, with pls. i-xxiii.

Levy, Hugo.

1898 A

Berträge zur Kenntniss des Baues und der Entwicklung der Zähne bei den Reptilien.

Jenaische Zeitschr. Naturwiss., xxxii (n. s. xxv), pp. 313-346, with pl. xi.

Contains numerous citations of the literature of the subject.

Lewis, J. L.

1880 A

Fossil remains in southwest Missouri.

Kansas City Review of Science and Industry, iv, p. 207.

Mentions the finding of a tooth of a horse and a large tusk 30 feet below the surface, in Bates County, Mo.

Lewis, H. C.

1882 A

Evidences of the existence of pre-glacial man.

Proc. Acad. Nat. Sci. Phila., 1882, pp. 292-293.

Leydig, F.

1876 A

Über den Bau der Zehen bei Batrachiern und die Bedeutung des Fersenhöckers.

Morpholog. Jahrbuch, ii, pp. 165-196, with pls. viii-xi.

Lindhahl, Josua.

1892 A

Description of a skull of *Megalonyx leidy*, n. sp.

Trans. Amer. Philos. Soc., xvii, pp. 1-10, with pls. i-v.

Lindhahl, Josua—Continued. 1897 A

Description of a Devonian ichthyodolomite, *Heteracanthus uddeni*, n. sp., from Buffalo, Iowa.

Jour. Cincinnati Soc. Nat. Hist., xix, pp. 95-98, with pl. vi.

Lindström, G.

1895 A

On the remains of a *Cyathaspis* from the Silurian strata of Gotland.

Bihang k. Svenska Vet.-Akad. Handlingar, xxi, Afd. iv, No. 3, pp. 1-15, with pls. i, ii.

Describes and figures the microscopic structure of the shields and scales of *Cyathaspis*.

Lippincott, James S.

1881 A

An address to the fossil bones in a private museum.

Amer. Naturalist, vol. xv, p. 37.

Reply to J. S. L., p. 38.

Lister, George.

1846 A

Letter to Jeffries Wyman on Koch's *Hydrarchos*.

Proc. Boston Soc. Nat. Hist., ii, pp. 94-95.

Written from Washington County, Ala.

Lockwood, Samuel.

1883 A

A *Mastodon americanus* in a beaver meadow.

Proc. Amer. Assoc. Adv. Sci., 31st meeting, Montreal, 1882, pp. 365-366.

1886 A

The ancestry of *Nasua*.

Amer. Naturalist, xx, pp. 320-325.

Lönnberg, Einar.

1899 A

On some remains of "*Neomylodon listai*" Ameghino, brought home by the Swedish Expedition to Terra del Fuego, 1895-1897.

Svenska Exped. till Magellansl., ii, No. 7, pp. 149-170, with pls. xii-xiv.

1900 A

On the structure and anatomy of the musk ox (*Ovibos moschatus*).

Proc. Zool. Soc. Lond., 1900, pp. 686-718, with 10 figs. in the text.

Logan, W. E.

1863 A

Superficial geology of Canada.

Geol. Surv. Canada, 1863, pp. 886-930.

Lohest, Maximin.

1884 A

Recherches sur les poissons des terrains paléozoïques de Belgique. Poissons de l'ampélite alunifère, des genres *Campodus*, *Petrodus*, et *Xystracanthus*.

Annales Soc. Géol. Belgique, xi, pp. 295-325, pls. iii, iv.

1888 A

Recherches sur les poissons des terrains paléozoïques de Belgique. Pois-

Lohest, Maximin.—Continued.

sons des Psammites du Condroz, Famenmien supérieur.

Annales Soc. Géol. Belgique, xv, pp. 112-203, pls. i-xi.

1890 A

De la découverte d'espèces américaines de poissons fossiles dans le Dévonien supérieur de Belgique.

Annales Soc. Géol. Belgique, xvi, Bull. pp. lvii-lix.

The finding of *Dinichthys pustulosus* and *D. terrilli* in Belgium is announced. The former name refers to *D. tuberculatus*, not to *D. pustulosus* Eastman.

Longhi, Paolo.

1899 A

Sopra i resti di un cranio di *Champsodelphis* fossile scoperto nella molassa miocenica del Bellunese.

Atti. Soc. Veneto-Trent. Sci. (2), iii, pp. 323-381, with pls. i-iii.

Treats of the genus *Champsodelphis*, with references to *Squalodon*.

Loomis, Frederic B.

1900 A

Die Anatomie und die Verwandtschaft der Ganoid-und Knochen-Fische aus der Kreide-Formation von Kansas, U. S. A.

Palæontographica xvi, pp. 213-283, with pls. xix-xxvii, and 13 figs. in the text.

Lortet, L.

1892 A

Les reptiles fossiles du bassin du Rhone.

Arch. Mus. d'Hist. Nat. de Lyon, v, pp. 3-139, with pls. i-xii, and 10 figs. in the text.

In this extensive paper are described the genera *Idiochelys*, *Hydropelta*, *Eurysternum*, *Sauranodon*, *Homæosaurus*, *Euposaurus*, *Atoposaurus*, *Alligatorellus*, etc.

Lortet, Dr. L., and Chantre, E.

1879 A

Recherches sur les mastodontes et les faunes mammalogiques que les accompagnent.

Archives Muséum d'Histoire Naturelle de Lyon, ii, pp. 285-311, with pls. i-xvi.

Portion of "Études paléontologiques dans le bassin du Rhone."

Lucas, Frederick A.

1888 A

Great auk notes.

The Auk, v, pp. 278-283.

1890 A

The expedition to Funk Island, with observations upon the history and anatomy of the great auk.

Ann. Rep. Smith. Inst.; U. S. Nat. Mus., for 1888, pp. 493-529, with pls. lxxii, lxxiii.

Presents also a list of papers relating to the great auk.

Lucas, Frederick A.—Cont'd.

1892 A

On *Carcharodon mortoni* Gibbes.

Proc. Biolog. Soc. of Washington, vii, pp. 151-152.

Shows that *C. mortoni* is a synonym of *C. megalodon*.

1895 A

Skeletons of *Zeuglodon*.

Science (2), ii, pp. 42-43.

Refers to the finding of two skeletons by Mr. Chas. Schuchert, and makes some statements of facts about this animal.

1895 B

Notes on the osteology of *Zeuglodon cetoides*.

Amer. Naturalist, xxix, pp. 745-746.

1896 A

Contributions to the natural history of the Commander Islands. XI. The cranium of Pallas's cormorant.

Proc. U. S. Nat. Mus., xviii, pp. 717-719, with pls. xxxiv and xxxv.

Describes and figures the cranium of *Phalacrocorax perspicillatus*.

1897 A

Fossil bison of North America.

Science (2), vi, p. 814.

Abstract of remarks made before Biological Soc. Washington.

1898 A

Contributions to palæontology. 1. A new crocodile from the Trias of southern Utah. 2. A new species of *Dimictis* (*D. major*).

Amer. Jour. Sci. (4), vi, p. 399.

The crocodile above described is *Heterodontosuchus ganei*.

1898 B

A new snake from the Eocene of Alabama.

Proc. U. S. Nat. Mus., xxi, pp. 637-638, with pls. xlv, xlvi.

This paper describes the new genus and species *Pterosphenus schucherti*.

1898 C

Publications of American Museum of Natural History.

Science (2), viii, pp. 96-97.

Contains a reference to figure of model of *Megalosaurus (Laelaps) aquilunguis*.

1898 D

The fossil bison of North America.

Science (2), viii, p. 678.

Abstract of remarks made before Biolog. Soc. Washington. New species *B. occidentalis* described.

- Lucas, Frederick A.**—Cont'd. 1899 A
The fossil bison of North America.
Proc. U. S. Nat. Mus., xxi, pp. 755-771, with
pls. lxxv-lxxxiv and 2 text figs.
Reviewed by Dr. J. A. Allen in Amer. Nat-
uralist, xxxiii, pp. 665-666.
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- 1899 B
The characters of *Bison occidentalis*,
the fossil bison of Kansas and Alaska.
Kansas Univ. Quart., viii, A, pp. 17-18, with
pls. viii, ix.
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- 1899 C
The nomenclature of the hyoid in
birds.
Science (2), ix, pp. 323-324, with 1 fig.
-
- 1900 A
The truth about the mammoth.
McClure's Magazine, xiv, pp. 349-355, Feb.,
with 5 figs. in the text.
-
- 1900 B
Characters and relations of *Gallinu-
loides*, a fossil gallinaceous bird from
the Green River shales of Wyoming.
Bull. Mus. Comp. Zool. (Harvard), xxxvi,
pp. 79-84, with pl. i.
Describes *Gallinuloides wyomingensis* East-
man.
-
- 1900 C
Palæontological notes.
Science (2), xii, pp. 809-810.
Notes on *Thespesius*, and *Basilosaurus
cetoides*.
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- 1900 D
A new rhinoceros, *Trigonias osborni*,
from the Miocene of South Dakota.
Proc. U. S. Nat. Mus., xxiii, pp. 221-223, with
2 figs. in the text.
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- 1900 E
The pelvic girdle of *Zeuglodon*, *Basi-
losaurus cetoides* (Owen), with notes on
other portions of the skeleton.
Proc. U. S. Nat. Mus., xxiii, pp. 327-331,
with pls. v-vii.
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- 1900 F
A new fossil cyprinoid, *Leuciscus
turneri*, from the Miocene of Nevada.
Proc. U. S. Nat. Mus., xxiii, pp. 333-334,
with pl. viii.
See also Leidy and Lucas; Stejne-
ger and Lucas.
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- Ludwig, Rudolph.** 1877 A
Fossile Crocodiliden aus der Tertiär-
formationen des Mainzer Beckens.
Palæontographica, Suppl., iii, Lief. 4, 5; pp.
1-54, with pls. i-xvi.
-
- Lütken, Chr.** 1868 A
On *Xenacanthus* (*Orthacanthus*) *de-
chenii* Goldfuss.
Geol. Magazine (1), v, pp. 376-380.
A review of various papers by Professor
Kner.
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- 1868 B
Professor Kner's Classification of the
Ganoïds.
Geol. Magazine (1), v, pp. 429-432.
-
- 1873 A
Ueber die Begrenzung und Einthei-
lung der Ganoïden.
Palæontographica, xxii, pp. 1-54.
-
- Lund, P. W.** 1839 A
Un aperçu des espèces de mammi-
fères fossiles découverts au Brésil.
Comptes rend. Acad. Sci. Paris, viii, pp.
570-577.
For a translation of this communication see
Annals Nat. Hist. 1839, iii, pp. 210-213.
-
- 1839 B
Coup d'œil sur les espèces etientes de
mammifères du Brésil; extrait de quel-
ques mémoires présentés à l'Académie
royale des Sciences du Copenhagen.
Annales Sci. Naturelles (2), xi, pp. 214-234.
For abstract see Neues Jahrb. Min., 1840, pp.
120-125.
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- 1841 A
Blik paa Brasiliens Dyreverden för
sidste Jordomvæltning.
K. Danske Vidensk. Selskabs Afhandl, viii,
pp. 27-57; 61-86; 217-296, with pls. xiv-xxvii.
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- 1842 A
Blik paa Brasiliens Dyreverden för
sidste Jordomvæltning.
K. Danske Vidensk. Selskabs Afhandl, ix,
pp. 137-208, with pls. xxviii-xxxviii.
See also Annales Sci. Naturelles, 1839 (2), xi,
pp. 214-234.
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- Lydekker, R.** 1880 A
Indian Tertiary and Post-tertiary
Vertebrata. Siwalik and Narbada *Pro-
boscidia*. Family i, *Dinotheridæ*. Fam-
ily ii, *Elephantidæ*.
Palæont. Indica (10), i, pp. 182-294, with
pls. xxix-xlvi.
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- 1881 A
Indian Tertiary and Post-tertiary
Vertebrata. Siwalik *Rhinocerotidæ*.
Palæont. Indica (10), ii, pp. 1-62, with pls. i-x.
To this paper is appended a list of the prin-
cipal works that have been published on the
family of *Rhinocerotidæ*.

Lydekker, R.—Continued. 1882 A
Indian Tertiary and Post-tertiary
Vertebrata. Siwalik and Narbada *Equi-*
dæ.

Palæont. Indica (10), ii, pp. 67-98, with pls. xi-xv.

Appended is a list of the principal works and memoirs on the osteology and palæontology of *Equus* and *Hippotherium*.

1883 A

Indian Tertiary and Post-tertiary
Vertebrata. Siwalik selenodont *Suina*,
etc.

Palæont. Indica (10), ii, pp. 143-177, with pls. xxiii-xxv.

Besides the descriptions of the Indian species, there is a classification of the *Bunodontia* and the *Selenodontia*, a list of the species of *Hypodontus*, and references to memoirs relating to the *Anthracotheriidae*, *Oreodontidae*, etc.

1884 A

Indian Tertiary and Post-tertiary
Vertebrata. Siwalik and Narbada *Carnivora*.

Palæont. Indica (10), ii, pp. 178-355, with pls. xxvi-xlv.

Contains important discussions of the genera of *Carnivora*, with lists of species, and references to authorities.

1884 B

Indian Tertiary and Post-tertiary
Vertebrata. Additional Siwalik *Perissodactyla* and *Proboscidea*.

Palæont. Indica (10), iii, pp. xi-xxiv; 1-34, with pls. i-v.

Contains discussion of the teeth of elephants and mastodons.

1884 C

Indian Tertiary and Post-tertiary
Vertebrata. Siwalik and Narbada bunodont *Suina*.

Palæont. Indica (10), iii, pp. 35-104, with pls. vi-xii.

Treats especially of the genera *Sus* and *Hypotherium*, and has appended a list of memoirs.

1885 A

Note on the zoological position of the genus *Microchærus*, Wood, and its apparent identity with *Hyopsodus*, Leidy.

Quart. Jour. Geol. Soc., xli, pp. 529-531, with 1 woodcut.

1885 B

Catalogue of the fossil *Mammalia* in the British Museum. Part I. Containing the orders *Primates*, *Chiroptera*, *Insectivora*, *Carnivora*, and *Rodentia*.

Pp. i-xxx; 1-268, with 33 figs. in the text. London, 1885.

Lydekker, R.—Continued. 1885 C

Catalogue of the fossil *Mammalia* in the British Museum. Part II. Containing the order *Ungulata*, suborder *Artiodactyla*.

Pp. i-xxii; 1-324, with 39 figs. in the text. London, 1885.

1885 D

Note on the generic identity of the genus *Esthonyx*, Cope, with *Platycheerops*, Charlesworth (= *Miolophus*, Owen).
Geol. Magazine (3), ii, pp. 360-361.

1885 E

Memoirs on extinct North American vertebrates, by Prof. E. D. Cope.

Geol. Magazine (3), ii, pp. 468-474.

A review of several of Professor Cope's papers.

1886 A

Catalogue of the fossil *Mammalia* in the British Museum. Part III. Containing the order *Ungulata*, suborders *Perissodactyla*, *Toxodontia*, *Condylarthra*, and *Amblypoda*.

Pp. i-xvi; 1-186, with 30 figs. in text. London, 1886.

1886 B

Catalogue of the fossil *Mammalia* in the British Museum. Part IV. Containing the order *Ungulata*, suborder *Proboscidea*.

Pp. i-xxiv; 1-235, with 32 figs. in the text. London, 1886.

1886 C

M. Dollo on the evolution of the teeth of herbivorous *Dinosauria*.

Geol. Magazine (3), iii, pp. 274-276, with 10 figs. in the text.

1886 D

Dr. Max Schlosser on the *Ungulata*.

Geolog. Magazine (3), iii, pp. 326-328.

A review of Dr. Schlosser's paper in the *Morphologisches Jahrbuch*, xii, pp. 1-136.

1886 E

Indian Tertiary and Post-tertiary
Vertebrata. Siwalik *Crocodylia*, *Lacerilia*, and *Ophidia*.

Palæont. Indica (10), iii, pp. 209-240, with pls. xxviii-xxxv.

1887 A

Catalogue of the fossil *Mammalia* in the British Museum. Part V. Containing the group *Tillodontia*, the orders *Sirenia*, *Cetacea*, *Edentata*, *Marsupialia*, *Monotremata*, and Supplement.

Pp. i-xxxv; 1-345, with 55 figs. in the text. London, 1887.

Lydekker, R.—Continued. 1888 A

Note on a new Wealden Iguanodont and other dinosaurs.

Quart. Jour. Geol. Soc., xlv, pp. 46-61, with pl. iii and 3 figs. in the text.

1888 B

Catalogue of the fossil *Reptilia* and *Amphibia* in the British Museum. Part I. Containing the orders *Ornithosauria*, *Crocodylia*, *Dinosauria*, *Squamata*, *Rhynchocephalia*, and *Proterosauria*.

Pp. i-xxviii; 1-309, with 69 figs. in the text. London, 1888.

1888 C

Notes on Tertiary *Lacertilia* and *Ophidia*.

Geol. Magazine (3), v, pp. 110-113.

1888 D

Note on the classification of the *Ichthyopterygia*.

Geol. Magazine (3), v, pp. 309-314.

1888 E

British Museum Catalogue of fossil *Reptilia* and papers on the Enaliosaurians.

Geol. Magazine (3), v., pp. 451-453.

1889 A

On a skull of the chelonian genus *Lytoloma*.

Proc. Zool. Soc. Lond., 1889, pp. 60-66, with pls. vi-vii.

1889 B

On an apparently new species of *Hyracodontotherium*.

Proc. Zool. Soc. Lond., 1889, pp. 67-69, with 2 woodcuts.

Describes *H. filholi*, from central France.

1889 C

On the remains and affinities of five genera of Mesozoic reptiles.

Quart. Jour. Geol. Soc., xlv, pp. 41-59, with 1 pl. and 9 text figs.

1889 D

On remains of Eocene and Mesozoic *Chelonia* and a tooth of (?) *Ornithopsis*.

Quart. Jour. Geol. Soc., xlv, pp. 227-246, with pl. viii and 7 woodcuts in the text.

1889 E

On certain chelonian remains from the Wealden and Purbeck.

Quart. Jour. Geol. Soc., xlv, pp. 511-518, with 4 figs. in the text.

1889 F

Catalogue of the fossil *Reptilia* and *Amphibia* in the British Museum. Part

Lydekker, R.—Continued.

II. Containing the orders *Ichthyopterygia* and *Sauropterygia*.

Pp. i-xxiii; 1-307, with 85 figs. in the text. London, 1889.

1889 G

Catalogue of the fossil *Reptilia* and *Amphibia* in the British Museum. Part

III. Containing the order *Chelonia*.

Pp. i-xviii; 1-239, with 53 figs. in the text. London, 1889.

1889 H

On a Cœluroid dinosaur from the Wealden.

Geol. Magazine (3), vi, pp. 119-121.

1889 I

On an ichthyosaurian paddle, showing the contour of the integuments.

The Geol. Magazine (3), vi, pp. 388-390, with 1 fig. in the text.

1889 J

[Remarks on Professor Seeley's paper on *Ornithopsis*.]

Quart. Jour. Geol. Soc., xlv., pp. 396-397.

Believes that *Cettosaurus* should yield to *Cardiodon*, and *Ornithopsis* to *Hoplosaurus* (*Oplosaurus*) or even *Pelorosaurus*.

1889 K

Skeleton of *Phenacodus*.

Nature, xl, pp. 57-58, with 1 fig. in the text.

The figure is taken from Cope.

1889 L

Notes on new and other dinosaurian remains.

Geol. Magazine (3), vi, pp. 352-356, with text figs. A-D.

Contains figures and description of *Arctosaurus osborni* Adams.

1890 A

Catalogue of the fossil *Reptilia* and *Amphibia* in the British Museum. Part

IV. Containing the orders *Anomodontia*, *Ecaudata*, *Caudata*, and *Labyrinthodontia*; and supplement.

Pp. i-xxiii, 1-295, with 66 figs. in the text. London, 1890.

1890 B

On the remains of small sauropodous dinosaurs from the Wealden.

Quart. Jour. Geol. Soc. Lond., xlv, pp. 182-184, with pl. ix and 1 text fig.

Regards the remains as belonging to *Pleurocalus* Marsh.

1891 A

Catalogue of the fossil birds in the British Museum.

Pp. i-xxvii, 1-368, with 75 figs. London, 1891.

Lydekker, R.—Continued. 1891 B
Professor Osborn on the molars of the *Perissodactyla*.

Geol. Magazine (3), viii, pp. 317-321, with 3 figs. in the text; p. 384.

— 1891 C
On British fossil birds.
The Ibis (6), iii, pp. 381-410.

— 1892 A
On a remarkable sirenian jaw from the Oligocene of Italy, and its bearing on the evolution of the *Sirenia*.

Proc. Zool. Soc. Lond., 1892, pp. 77-83, with 2 woodcuts.

— 1892 B
Recent advances in knowledge of the ichthyosaurian reptiles.
Natural Science, i, pp. 514-521, with 2 figs. in the text.

— 1893 A
On a mammalian incisor from the Wealden of Hastings.
Quart. Jour. Geol. Soc. Lond., xlix, pp. 281-283, with figs. 1, 1a, 2, 2a.

— 1893 B
Some recent restorations of dinosaurs.
Nature, xlviii, pp. 302-304, with 5 figs. in the text.
See, regarding this paper, O. C. Marsh, Nature, xlviii, p. 437.

— 1893 C
On zeuglodont and other cetacean remains from the Tertiary of the Caucasus.
Proc. Zool. Soc. Lond., 1892, pp. 558-564, with pls. xxxvi-xxxviii.

— 1893 D
Contributions to a knowledge of the fossil vertebrates of Argentina; i. The dinosaurs of Patagonia; II. Cetacean skulls from Patagonia; III. A study of extinct Argentine ungulates.

Anales del Museo de la Plata, ii, pp. 1-16, pls. i-v; pp. 1-13, pls. i-v; pp. 1-91, pls. i-xxxii.

— 1893 E
The restoration of extinct animals.
Natural Science, ii, pp. 135-143, with 2 text figs.

This is a review of H. N. Hutchinson's Extinct Monsters.

— 1894 A
Contributions to a knowledge of the fossil vertebrates of Argentina. Part

Lydekker, R.—Continued.

II. 1. Supplemental observations on Argentine ungulates. 2. The extinct edentates of Argentina. 3. On two extinct carnivores.

Anales del Museo de la Plata, iii, pp. i-vii; 1-118; 1-4; with pls. i, ii; i-lxi.

— 1896 A
[Articles in Newton's Dictionary of Birds, 1893-1896.]

— 1896 B
A geographical history of mammals.
8vo, pp. i-xii; 1-400, with 82 figs. in the text.

— 1898 A
The deer of all lands. A history of the family *Cervidæ*, living and extinct.
4to, pp. i-xx; 1-329, with pls. i-xxiv and text figs. 1-80. London, 1898.

— 1898 B
Wild oxen, sheep, and goats of all lands, living and extinct.
London, 1898. 4to, pp. i-xv; 1-318, with pls. i-xxvii and 61 figs. in the text.

— 1900 A
The dental formula of the marsupial and placental *Carnivora*.
Proc. Zool. Soc. Lond., 1899, pp. 922-928, with pl. lxii.

See also **Flower and Lydekker; Thomas and Lydekker.**

Lyell, Charles. 1842 A
On the fossil footprints of birds and impressions of raindrops in the valley of the Connecticut.
Proc. Geol. Soc. Lond., iii, pp. 793-796.
No species described or figured.

— 1843 A
On the fossil footprints of birds and impressions of raindrops in the valley of the Connecticut.
Amer. Jour. Sci., xlv, pp. 394-397.

— 1843 B
On the geological position of the *Mastodon giganteum* and associated fossil remains at Bigbone Lick, Kentucky.
Ann. and Mag. Nat. Hist., xii, pp. 125-128.
See also Proc. Geol. Soc. Lond., iv, pp. 36-39, 1843; Amer. Jour. Sci., 1844, xlv, pp. 320-323.

— 1843 C
On the Tertiary strata of the island of Martha's Vineyard in Massachusetts.
Proc. Geol. Soc. Lond., iv, pp. 31-33.
Also in Amer. Jour. Sci. (2), xlv, pp. 318-320.

Lyell, Charles—Continued. 1845 A

On the Miocene Tertiary strata of Maryland, Virginia, and of North and South Carolina.

Quart. Jour. Geol. Soc. Lond., i, pp. 413-429.

Refers to the occurrence of the remains of various species of sharks and of tooth of *Mastodon longirostris*.

1846 A

On the evidence of fossil footprints of a quadruped allied to *Cheirotherium* in the Coal strata of Pennsylvania.

Amer. Jour. Sci. (2), ii, pp. 25-29.

1846 B

On footmarks discovered in the Coal measures of Pennsylvania.

Quart. Jour. Geol. Soc. Lond., ii, pp. 417-420.

No species are named.

1846 C

On the newer deposits of the Southern States of North America.

Quart. Jour. Geol. Soc. Lond., ii, pp. 405-410.

Refers to the finding of *Zeuglodon* bones in Alabama.

1847 A

On the alleged coexistence of man and the megatherium.

Amer. Jour. Sci. (2), iii, pp. 267-269.

1847 B

On the structure and probable age of the coal field of the James River, near Richmond, Va.

Quart. Jour. Geol. Soc. Lond., iii, pp. 261-280, with pls. viii and ix.

1848 A

On the fossil footmarks of a reptile in the Coal formation of the Allegheny Mountains.

Athenæum, 1848, pp. 166-167.

1853 A

On the discovery of some fossil reptilian remains, and a land shell in the interior of an erect fossil tree in the Coal-measures of Nova Scotia, with remarks on the origin of coal fields, and the time required for their formation.

Amer. Jour. Sci. (2), xvi, pp. 33-41.

Taken from Proc. Royal Soc. of Great Britain, 1853.

Lyell, Chas., and Dawson, J. W. 1853 A

On the remains of a reptile (*Dendropteron acadianum*, Wyman and Owen), and of a land shell discovered in the interior of an erect fossil tree in the coal measures of Nova Scotia.

Quart. Jour. Geol. Soc. Lond., ix, pp. 58-63, with pls. ii-iv.

Maack, G. A.

1865 A

Palæontologische Untersuchungen über noch unbekannte Lophiodonfossilien von Heidenheim am Hahnenkamme in Mittelfranken nebst einer kritischen Betrachtung sämtlicher bis jetzt bekannten Species des Genus *Lophiodon*.

8vo, Leipzig, 1865, pp. 1-75, with pls. i-xiv.

1869 A

Die bis jetzt bekannten fossilen Schildkröten und die in oberen Jura bei Kelheim (Bayern) und Hannover neu aufgefundenen ältesten Arten derselben.

Palæontographica xviii, 193-338, pls. xxxiii-xl.

For review of this work and various corrections see Cope, E. D., 1870 T.

McAdams, William.

1884 A

A new vertebrate from the St. Louis limestone.

Proc. Amer. Assoc. Adv. Sci., 32d meeting, Minneapolis, 1883, p. 269.

Abstract; no generic or specific name.

McCallie, S. W.

1892 A

Remains of the mastodon recently found in Tennessee.

Science, xx, p. 333.

McCoy, Frederick.

1848 A

On some new fossil fish of the Carboniferous period.

Ann. and Mag. Nat. Hist. (2), ii, pp. 1-10; 115-134.

1848 B

Reply to Sir Philip Egerton's letter on the *Placodermi*.

Ann. and Mag. Nat. Hist. (2), ii, pp. 277-280.

1848 C

On some new ichthyolites from the Scotch Old Red sandstone.

Ann. and Mag. Nat. Hist. (2), ii, pp. 297-312, with text figs.

1853 A

On the structure of certain fossil fishes found in the Old Red sandstone of the north of Scotland.

Report Brit. Assoc. Adv. Sci., 22d meeting, Belfast, 1852, p. 55.

Discusses structure of *Holoptychius*.

1853 B

On the mode of succession of the teeth in *Cochliodus*.

Report Brit. Assoc. Adv. Sci., 22d meeting, Belfast, 1852, p. 55.

- McCoy, Frederick**—Continued. 1855 A
Description of the British palæozoic fossils in the Geological Museum of the University of Cambridge.
Pp. 1-661, with 26 pls., Cambridge, 1854.
The vertebrate fossils are described on pp. 575-644.
- McGee, W. J.** 1887 A
Oribos cavifrons from the Loess of Iowa.
Amer. Jour. Sci. (3), xxxiv, pp. 217-220.
- Mackie, S. J.** 1863 A
On a new species of *Hybodus* from the lower Chalk.
The Geologist, vi, pp. 241-246, pl. xiii.
Discusses the genus *Hybodus*.
- 1863 B
Cestracient fishes of the Chalk.
The Geologist, vi, pp. 161-163, with pl. ix.
Contains list of species of *Ptychodus* in British Museum.
- Mackintosh, H. W.** 1878 A
Note on the microscopic structure of the scale of *Amia calva*.
Proc. Roy. Dublin Soc., i, pp. 93-95, with pls. i, ii.
- McMurrich, J. P.** 1884 A
On the osteology of *Amiurus catus* (L.) Gill.
Zoolog. Anzeiger, vii, pp. 296-299.
- 1884 B
The osteology of *Amiurus catus* (L.) Gill.
Proc. Canadian Institute, ii, pp. 270-310, with pl. ii.
- Madison (Bishop).** 1806 A
The Mammoth, or American elephant.
Med. and Phys. Jour., London, xv, p. 486.
Shows that this animal was herbivorous.
- Maggi, Leopoldo.** 1898 A
Placche osteodermiche interparietali degli Stegocefali e rispondenti centri di ossificazione interparietali dell' uomo.
Rendiconti Reale Istituto Lombardo Sci. e Lett. (2), xxxi, pp. 211-228, with pl. i.
- 1898 B
Omologie craniali fra Ittiosauri e feti dell' uomo e d'altri mammiferi. Ricerche e considerazioni relative all' ontogenia dei fossili.
Rendiconti Reale Istituto Lombardo Sci. e Lett. (2), xxxi, pp. 631-641, with pl. ii.
- 1898 C
Il canale cranio-faringeo negli ittiosauri omologo a quello dell' uomo e d'altri mammiferi.
Rendiconti Reale Istituto Lombardo Sci. e Lett. (2), xxxi, pp. 761-771, with pl. iii.
- Maggi, Leopoldo**—Continued. 1898 D
Le ossa sovraorbitali nei mammiferi.
Rendiconti Reale Istituto Lombardo Sci. e Lett. (2), xxxi, pp. 1089-1099, with pl. iv.
- 1898 E
Serie di ossicini del tegmen cranii in alcuni cani (*Canis*), e loro omologhi ed omotopi in alcuni Storioni (*Acipenser*).
Rendiconti Reale Istituto Lombardo Sci. e Lett. (2), xxxi, pp. 1473-1492, with pl. v.
- Magnus, Hugo.** 1869 A
Physiologisch-anatomische Untersuchungen über das Brustbein der Vögel.
Archiv Anat., Physiol. u. wissenschaft. Med., 1868, pp. 682-710, with pls. xvi, xvii.
Issued in January, 1869.
- Major, C. J. Forsyth.** 1873 A
Nagerüberreste aus Bohnerzen Süddeutschlands und der Schweiz.
Palæontographica, xxii, 75-130, pls. iii-vi.
Contains remarks on dentition of various North American genera of mammals.
- 1877 A
Beiträge zur Geschichte der fossilen Pferde, insbesondere Italiens. Erster Theil.
Abhandl. schweizer. paläontolog. Gesellsch., iv, pp. 1-16, with 4 pls.
- 1880 A
Beiträge zur Geschichte der fossilen Pferde, insbesondere Italiens. Zweiter Theil.
Abhandl. schweizer. paläontolog. Gesellsch., vii, pp. 1-154, with 3 double plates.
This is the continuation and conclusion of Major, C. J. F., 1877 A.
- 1893 A
On some Miocene squirrels, with remarks on the dentition and classification of the *Sciurinae*.
Proc. Zool. Soc. Lond., 1893, pp. 179-215, with pls. viii-xi.
- 1899 A
On fossil and recent *Lagomorpha*.
Trans. Linn. Soc. Lond. (2), vii, pp. 433-520, with pls. xxxvi-xxxix.
- Malmgren, A. J.** 1864 A
Om tandbyggnaden hos Hvalrossen (*Odobænus rosmarus* L.) och tandombytet hos hans af ödda unge.
Overs. Vetensk.-Akad. Förhandl., xx, pp. 505-522, with pl. vii.
- 1865 A
Ueber den Zahnbau des Walrosses (*Odobænus rosmarus* L.) und über den Zahnbau seines ungeborenen Junges.
Archiv Naturgesch., xxxi, i, pp. 182-202.
Translation of Malmgren, 1864 A.

- Mandl, L.** 1839 A
Recherches sur la structure intime des écaillés des poissons.
Ann. Sci. Naturelles (2), Zool., xi, pp. 337-371, with pl. ix.
- Männer, H.** 1899 A
Beiträge zur Entwicklungsgeschichte der Wirbelsäule bei Reptilien.
Zeitchr. wissensch. Zool. lxvi, pp. 43-68, with pls. iv-vii.
- Mantell, G. A.** 1846 A
Description of footmarks and other imprints on a slab of New Red sandstone from Turners Falls, Mass., collected by Dr. James Deane, of Greenfield, United States.
Quart. Jour. Geol. Soc., ii, p. 38.
- 1848 A
On the structure of the jaws and teeth of the *Iguanodon*.
Philos. Trans. Roy. Soc. Lond., pp. 183-202, pls. 16-19.
- 1848 B
A brief notice of organic remains recently discovered in the Wealden formation.
Quart. Jour. Geol. Soc., v, pp. 37-43, with pl. iii.
Describes remains of *Iguanodon*.
- 1849 A
Additional observations on the osteology of the *Iguanodon* and *Hylæosaurus*.
Philos. Trans. Roy. Soc. Lond., pp. 271-305, pls. 26-32.
This paper includes "Notes on the vertebral column of the *Iguanodon*," by A. G. Melville.
- Marck, W. v.** 1863 A
Fossile Fische, Krebse und Pflanzen aus dem Plattenkalk der jüngsten Kreide in Westphalen.
Palæontographica, xi, pp. 1-83, with pls. i-xiv.
- Marcou, John B.** 1887 A
Review of the progress of North American palæontology for the year 1886.
Amer. Naturalist, xxi, pp. 532-544.
- 1888 A
Review of the progress of North American palæontology for the year 1887.
Amer. Naturalist, xxii, pp. 679-691.
- Marcou, Jules.** 1858 A
Geology of North America, with two reports on the prairies of Arkansas and Texas, the Rocky Mountains of New Mexico, and the Sierra Nevada of California, originally made for the United States Government.
Pp. i-vi, 1-144, with 7 pls. and 3 maps.
The original description of *Ptychodus whipplei* occurs on page 33.
- Markert, F.** 1896 A
Die Flossenstachelen von *Acanthias*.
Ein Beitrag zur Kenntniss der Hartsubstanzgebilde der Elasmobranchier.
Zool. Jahrbücher, Abth. Anat. u. Ontol., ix, pp. 664-722, with pls. xlv-lxix and text-figs. A-K.
- Marsh, Dexter.** 1848 A
Fossil footprints.
Amer. Jour. Sci. (2) vi, pp. 272-274.
No species are named.
- Marsh, O. C.** 1862 A
On the saurian vertebræ from Nova Scotia.
Amer. Jour. Sci. (2), xxxiii, p. 278.
Eosaurus acadianus; name, but no description.
- 1862 B
Description of the remains of a new Enaliosaurian (*Eosaurus acadianus*) from the Coal formation of Nova Scotia.
Amer. Jour. Sci. (2), xxxiv, pp. 1-16, with pls. i, ii.
An abridgment of this description is found in Canadian Naturalist and Geologist, vol. vii, pp. 205-213.
- 1863 A
Description of the remains of a new Enaliosaurian (*Eosaurus acadianus*) from the Coal formation of Nova Scotia.
Quart. Jour. Geol. Soc., xix, pp. 52-56.
Abstract of Marsh, 1862 B.
- 1867 A
Discovery of additional *Mastodon* remains at Cohoes, N. Y.
Amer. Jour. Sci. (2), xliii, pp. 115-116.
- 1868 A
Notice of a new and diminutive species of fossil horse (*Equus parvulus*) from the Tertiary of Nebraska.
Amer. Jour. Sci. (2), xlvi, pp. 374-375.
Reprinted in Ann. and Mag. Nat. Hist. (4), iii, pp. 95-96, 1869; Kosmos, Leipzig, iv, p. 346, 1869. Abstract in Neues Jahrb. Mineral., 1869, p. 767.
- 1869 A
Notice of new reptilian remains from the Cretaceous of Brazil.
Amer. Jour. Sci. (2), xlvii, pp. 390-392.
Contains notice of *Thecocampa squankensis*.
Reprinted in Ann. and Mag. Nat. Hist. (4), iii, pp. 442-444. Abstract in Neues Jahrb. Mineral., 1871, p. 112.

- Marsh, O. C.—Continued.** 1869 B
 Notice of some new mosasauroid reptiles from the Green-sand of New Jersey.
 Amer. Jour. Sci. (2), xlviii, pp. 392-397.
 Abstract in Canadian Naturalist, iv, p. 331, and Geol. Magazine, vii, 1870, pp. 376-377.
- 1869 C
 Description of a new and gigantic fossil serpent (*Dinophis grandis*) from the Tertiary of New Jersey.
 Amer. Jour. Sci. (2), xlviii, pp. 397-400.
 Extract of this paper published in Amer. Naturalist, vol. iv, p. 254.
- 1870 A
 Notice of some fossil birds from the Cretaceous and Tertiary formations of the United States.
 Amer. Jour. Sci. (2), xlix, pp. 205-217.
 Abstracts in Geol. Magazine, vii, 1870, p. 318; Amer. Naturalist, iv, 1870, p. 310. Proc. Acad. Nat. Sci. Phila., xxii, 1870, pp. 5-6.
- 1870 B
 Note on the remains of fossil birds.
 Amer. Jour. Sci. (2), xlix, p. 272.
- 1870 C
 Notice of a new species of gavial from the Eocene of New Jersey.
 Amer. Jour. Sci. (2), i, pp. 97-99.
 Reprinted in Geol. Magazine, vii, p. 427, 1870.
- 1870 D
 Discovery of the Mauvaises Terres formation in Colorado.
 Amer. Jour. Sci. (2), i, p. 292.
 Reprinted in Canadian Naturalist, v, p. 240, 1871.
- 1870 E
 Notice of some new Tertiary and Cretaceous fishes.
 Proc. Amer. Assoc. Adv. Sci., 18th meeting, Salem, 1869, pp. 227-230.
 Abstract describing briefly *Histiophorus parvulus*, *Embalorhynchus kinnei*, *Phyllodus elegans*, *P. curvidens*, *Myliobates bisulcus*, *Dipristis meirsi*, *Enchodus semistriatus*.
- 1870 F
 [Remarks on *Hadrosaurus minor*, *Mosasaurus crassidens*, *Liodon laticaudus*, *Baptosaurus*, and *Rhinoceros matutinus*.]
 Proc. Acad. Nat. Sci. Phila., 1870, pp. 2-3.
- 1870 G
 [Remarks on *Laornis edwardsianus*, *Palæotringa littoralis*, *P. vetus*, *Telmatornis priscus*, *T. affinis*, *Grus haydeni*, and *Puffinus conradii*.]
 Proc. Acad. Nat. Sci. Phila., 1870, pp. 5-6.
 Names, but no descriptions.
- Marsh, O. C.—Continued.** 1870 H
 New fossil turkey.
 Amer. Naturalist, iv, p. 317.
 Notice of finding of *Meleagris altus*.
- 1870 I
 Announcement of discovery of *Meleagris altus* and of *Dicotyles antiquus*.
 Proc. Acad. Nat. Sci. Phila., 1870, p. 11.
 No descriptions are furnished.
- 1871 A
 Description of some new fossil serpents, from the Tertiary deposits of Wyoming.
 Amer. Jour. Sci. (3), i, pp. 322-329.
- 1871 B
 Notice of some new fossil reptiles from the Cretaceous and Tertiary formations.
 Amer. Jour. Sci. (3), i, pp. 447-459.
 Reprinted in Boll. R. Com. Geol. d'Italia, iii, pp. 278-283, 1872. See also Kosmos, vi, pp. 476-479; Pop. Sci. Rev., London, 1871, p. 436, and Neues Jahrb. Mineral, 1871, p. 890.
- 1871 C
 Note on a new and gigantic species of pterodactyle.
 Amer. Jour. Sci. (3), i, p. 472.
- 1871 D
 Notice of some new fossil mammals from the Tertiary formation.
 Am. Jour. Sci. (3), ii, pp. 35-44.
 Reprinted in Boll. R. Com. Geol. d'Italia, iii, pp. 343-350, 1872.
- 1871 E
 Notice of some new fossil mammals and birds from the Tertiary formations of the West.
 Amer. Jour. Sci. (3), ii, pp. 120-127.
 Reprinted in Boll. R. Com. Geol. d'Italia, iii, pp. 350-353, 1872.
- 1871 F
 [Description of *Lophiodon validus*.]
 Proc. Acad. Nat. Sci. Phila., 1871, p. 10.
- 1871 G
 [Communication on some new reptiles and fishes from the Cretaceous and Tertiary.]
 Proc. Acad. Nat. Sci. Phila., 1871, pp. 103-105.
- 1872 A
 Discovery of a remarkable fossil bird.
 Amer. Jour. Sci. (3), iii, pp. 56-57.
 Abstract in Nature, v, p. 348, 1872.
 First announcement of *Hesperornis regalis*.

- Marsh, O. C.—Continued.** 1872 B
Discovery of additional remains of *Pterosauria*, with descriptions of two new species.
Amer. Jour. Sci. (3), iii, pp. 241-248.
Abstract in Nature, v, p. 151, 1872.
- 1872 C
Discovery of the dermal scutes of mosasauroid reptiles.
Amer. Jour. Sci. (3), iii, pp. 290-292.
- 1872 D
Notice of a new species of *Hadrosaurus*.
Amer. Jour. Sci. (3), iii, p. 301.
Describes *H. agilis*.
- 1872 E
Preliminary description of *Hesperornis regalis*, with notices of four other new species of Cretaceous birds.
Amer. Jour. Sci. (3), iii, pp. 360-365.
Abstract in Nature, vi, pp. 90, 94. Reprinted in Ann. and Mag. Nat. Hist., (4), x, pp. 212-217; Boll. R. Com. Geol. d'Italia, iii, pp. 211-217, 1872.
- 1872 F
On the structure of the skull and limbs in mosasauroid reptiles, with descriptions of new genera and species.
Amer. Jour. Sci. (3), iii, pp. 448-464, with 4 pls.
See Kosmos, vi, pp. 447-449; Jour. de Zoologie, ii, p. 533, for abstracts.
- 1872 G
Preliminary description of new Tertiary mammals. Pt. I.
Amer. Jour. Sci. (3), iv, pp. 122-128 and erratum on p. 504.
Abstract of this paper in Neues Jahrb. Mineral., 1872, pp. 990-991.
- 1872 H
Note on *Rhinosaurus*.
Amer. Jour. Sci. (3), iv, p. 147.
Rhinosaurus changed to *Tylosaurus*.
- 1872 I
Preliminary description of new Tertiary mammals. Parts II, III, and IV.
Amer. Jour. Sci. (3), iv, pp. 202-224.
Abstract in Neues Jahrb. Mineral., 1872, pp. 990-991. Advance copies of this paper are said to have been issued Aug. 7, 1872.
- 1872 J
Notice of some new Tertiary and post-Tertiary birds.
Amer. Jour. Sci. (3), iv, pp. 256-262.
- 1872 K
Preliminary description of new Tertiary reptiles. Parts I and II.
Amer. Jour. Sci. (3), iv, pp. 298-309.
- Marsh, O. C.—Continued.** 1872 L
Note on *Tinoceras anceps*.
Amer. Jour. Sci. (3), iv, p. 322.
Abstract in Pop. Sci. Rev., London, 1873, p. 94.
- 1872 M
Notice of a new species of *Tinoceras*.
Amer. Jour. Sci. (3), iv, p. 323.
- 1872 N
Discovery of fossil *Quadrumania* in the Eocene of Wyoming.
Amer. Jour. Sci. (3), iv, pp. 405-406.
See also Geol. Magazine, x, 1873, p. 33, and Amer. Naturalist, vii, pp. 179-180.
- 1872 O
Note on a new genus of carnivores, from the Tertiary of Wyoming.
Amer. Jour. Sci. (3), iv, p. 406.
Reprinted in Geol. Magazine, x, 1873, pp. 33-34.
Describes *Oreocyon latidens*.
- 1872 P
Notice of a new reptile from the Cretaceous.
Amer. Jour. Sci. (3), iv, p. 406.
This paper describes the jaws of *Colonosaurus mudgei* n. g. et n. sp., which were afterwards found to be the jaws of *Ichthyornis dispar*. The paper is noticed in Geol. Magazine, x, 1873, p. 34.
- 1872 Q
Notice of a new and remarkable fossil bird.
Amer. Jour. Sci. (3), iv, p. 344.
Reprinted in Amer. Naturalist, vii, p. 50, and Ann. and Mag. Nat. Hist. (4), xi, p. 80, 1873.
Describes *Ichthyornis dispar*.
- 1872 R
Notice of some remarkable fossil mammals.
Amer. Jour. Sci. (3), iv, pp. 343-344.
Describes *Dinoceras mirabilis* and *Dinoceras lacustris*.
- 1872 S
Discovery of new Rocky Mountain fossils.
Proc. Amer. Philos. Soc., xii, pp. 578-579.
Reprinted in Ann. Sci. Geol., Paris, iii, pp. 99-100.
- 1872 T
New and remarkable fossils.
Amer. Naturalist, vi, pp. 495-497.
Copied from the Yale Courant.
- 1873 A
Notice of a new species of *Ichthyornis*.
Amer. Jour. Sci. (3), v, p. 74.
Description of *Ichthyornis celer*. Abstracts in Nature, vii, p. 310, 1873; Jour. de Zoologie, ii, pp. 40-41.

Marsh, O. C.—Continued. 1873 B
On the gigantic fossil mammals of the order *Dinocerata*.
Amer. Jour. Sci. (3), v, pp. 117-122, with pls. i, ii.

Translated into French in Ann. Sci. Naturelles (5), Zool., xvii, art. 9, pl. 21.
Jour. de Zoologie, ii, pp. 160-168.

For republication, abstracts, etc., see Marsh, 1884 F, p. 227.

1873 C
On a new subclass of fossil birds (*Odontornithes*).

Amer. Jour. Sci. (3), v, pp. 161-162.

Reprinted in Amer. Naturalist, vii, pp. 115-117; Ann. and Mag. Nat. Hist. (4), xi, pp. 233-234.

Translated into French in Ann. Sci. Naturelles (5), Zool., xvii, art. 9, pp. 8-11. Noticed in Geol. Magazine, x (1873), p. 115. Remarks on by Troschel in Verhandl. naturh. Vereines preuss. Rheinlande, xxx, Sitzungsber, p. 83.

Announces discovery of teeth.

1873 D
Fossil birds from the Cretaceous of North America.

Amer. Jour. Sci. (3), v, pp. 229-230.

1873 E
Note on the dates of some of Professor Cope's recent papers.

Amer. Jour. Sci. (3), v, pp. 235-236.

Also Amer. Naturalist, vii, pp. 303-306.

1873 F
Additional observations on the *Dinocerata*.

Amer. Jour. Sci. (3), v, pp. 293-296.

1873 G
Supplementary note on the *Dinocerata*.

Amer. Jour. Sci. (3), v, pp. 310-311.

1873 H
Notice of new Tertiary mammals.

Amer. Jour. Sci. (3), v, pp. 407-410, 485-488.

Abstract in Nature, viii, p. 76, 1873.

1873 I
New observations on the *Dinocerata*.
Amer. Jour. Sci. (3), v, pp. 300-301.

1873 J
On the gigantic mammals of the American Eocene.

Proc. Amer. Philos. Soc., xiii, pp. 255-256.

1873 K
The fossil mammals of the order *Dinocerata*.

Amer. Naturalist, vii, pp. 146-153, with pls. i and ii.

Published in part in Amer. Jour. Sci. (3), v, pp. 117-122 (Marsh, O. C., 1873 B).

Marsh, O. C.—Continued. 1873 L
On the genus *Tinoceras* and its allies.
Amer. Naturalist, vii, pp. 217-218.
In reply to Prof. E. D. Cope, Amer. Naturalist, vii, pp. 157-160 (Cope, E. D., 1873 W).

1873 M
Tinoceras and its allies.
Amer. Naturalist, vii, pp. 306-308.

1873 N
On some of Professor Cope's recent investigations.
Amer. Naturalist, vii, pp. 51-52.

1873 O
Note on the dates of some of Professor Cope's recent papers.
Amer. Naturalist, vii, p. 173.

1873 P
Reply to Professor Cope's explanation.
Amer. Naturalist, vii, appendix to June number, pp. i-ix.

1874 A
On the structure and affinities of the *Brontotheridæ*.

Amer. Jour. Sci. (3), vii, pp. 81-86, with pls. i and ii.

Abstracts: Nature, ix, p. 227, 1874; Amer. Naturalist, vol. viii, pp. 79-85, 1874; Jour. de Zoologie, iii, pp. 61-62, 1874.

1874 B
Notice of new equine mammals from the Tertiary formation.
Amer. Jour. Sci. (3), vii, pp. 247-258, with 5 figs. in the text.

Reprinted in Ann. and Mag. Nat. Hist. (4), xiii, pp. 397-400. Abstract in Nature, ix, p. 390, 1874.

Contains discussion of origin of modern horse.

1874 C
Notice of new Tertiary mammals. III.
Amer. Jour. Sci. (3), vii, pp. 531-534.

1874 D
Small size of the brain in Tertiary mammals.

Amer. Jour. Sci. (3), viii, pp. 66-67.
Reprints in Ann. and Mag. Nat. Hist., xiv, p. 167, Amer. Naturalist, viii, pp. 503-504, Jour. de Zoologie, iii, pp. 326-327. Abstract in Neues Jahrbuch Mineral., p. 772, 1874, and in Nature, x, p. 273.

1875 A
(An editorial note stating Professor Marsh's claim that Professor Cope's *Calamodon* is identical with Professor Marsh's *Stylinodon*.)
Amer. Jour. Sci. (3), ix, p. 151.

Marsh, O. C.—Continued. 1875 B
 Notice of new Tertiary mammals. IV.
 Amer. Jour. Sci. (3), ix, pp. 239-250.
 A notice of this paper, containing a list of
 the forms described, may be found in Jour. de
 Zoologie, iv, 1875, pp. 98-99.

1875 C
 New order of Eocene mammals.
 Amer. Jour. Sci. (3), ix, p. 221.
 Reprinted in Amer. Naturalist, ix, pp. 182-
 183; in Nature, xi, 1875, p. 368; in Ann. and
 Mag. Nat. Hist. (4), xv, p. 307; Jour. de Zoologie,
 iv, 1875, pp. 70-71; Pop. Sci. Rev., London,
 1875, p. 207.

The new order proposed is denominated
Tillodontia.

1875 D
 On the *Odontornithes*, or birds with
 teeth.
 Amer. Jour. Sci. (3), x, pp. 402-408, with pls.
 ix, x.

Reprinted in Geol. Magazine (2), iii, 1876,
 pp. 49-53, pl. ii; also in Jour. de Zoologie, iv,
 1875, pp. 494-502, pl. xv.

1875 E
Odontornithes, or birds with teeth.
 Amer. Naturalist, ix, pp. 624-631, with pls.
 ii, iii.
 Same as the preceding paper.

1875 F
 Mastodon of Otisville, Orange County,
 N. Y.
 Amer. Jour. Sci. (3), ix, p. 483.

1876 A
 Principal characters of the *Dinocerata*.
 Amer. Jour. Sci. (3), xi, pp. 163-168, pls. ii-vi.
 Reprinted in Jour. de Zoologie, v, pp. 136-145,
 pl. iv.
 Abstracts, etc., Nature, xiii, p. 374, 1876;
 Zeitschr. gesamt. Naturwiss. xiv, pp. 31-32,
 1876; Neues Jahrb. Mineral., pp. 780-781, 1876;
 Pop. Sci. Rev., London pp. 326-327, 1876.

1876 B
 Principal characters of the *Tillo-*
ntia.
 Amer. Jour. Sci. (3), xi, pp. 249-252, with
 pls. viii and ix.
 A translation of this paper appeared in Jour.
 de Zoologie, v, pp. 244-248, pl. xi. Abstract in
 Nature, xiii, p. 374.

1876 C
 Principal characters of the *Bronto-*
theridia.
 Amer. Jour. Sci. (3), xi, pp. 335-340, pls. x-
 xiii and 2 figs. in text.
 A translation of this paper appeared in Jour.
 de Zoologie, v, 1876, pp. 248-255; pl. xii. Ab-
 stract in Nature, xiv, p. 36.

Marsh, O. C.—Continued. 1876 D
 On some characters of the genus
Coryphodon.
 Amer. Jour. Sci. (3), xi, pp. 425-428, with 1
 page of figs.

Abstracts: Pop. Sci. Rev., London.. 1876, p.
 327; Nues Jahrb. Mineral., 1876, p. 781; Archiv.
 Sci. Phys. et Nat., Geneva, lvi, pp. 273, 274.

1876 E
 Notice of a new sub-order of *Ptero-*
sauria.
 Amer. Jour. Sci. (3), xi, pp. 507-509.
 Abstract in Ann. and Mag. Nat. Hist. (4),
 xviii, pp. 195-196; Jour. de Zoologie, v., pp.
 457-458.

1876 F
 Notice of new *Odontornithes*.
 Amer. Jour. Sci. (3), xi, pp. 509-511.
 Translated into French in Jour. de Zoologie,
 v., 1876, pp. 304-306.

1876 G
 Recent discoveries of extinct animals.
 Amer. Jour. Sci. (3), xii, pp. 59-61.
 Same, Amer. Naturalist, x, pp. 436-439.
 Abstract Neues Jahrb. Mineral., 1876, p. 782.

1876 H
 Notice of new Tertiary mammals. V.
 Amer. Jour. Sci. (3), xii, pp. 401-404.
 Abstracts in Arch. Sci. Phys. et Nat.,
 Geneva, xlix, pp. 127-128; Pop. Sci. Rev., Lon-
 don, 1877, pp. 97-98.

1876 I
 Principal characters of American
 pterodactyls.
 Amer. Jour. Sci. (3), xii, pp. 479-480.

1877 A
 Characters of *Coryphodontida*.
 Amer. Jour. Sci. (3), xiv, pp. 81-85, with
 pl. iv.
 Abstracts: Amer. Naturalist, xi, 1877, p. 500;
 Neues Jahrb. Mineral. 1877, p. 767. Reprint in
 Jour. de Zoologie, vi, 1877, pp. 380-385.

1877 B
 Characters of the *Odontornithes*, with
 notice of a new allied genus.
 Amer. Jour. Sci. (3), xiv, pp. 85-87, with
 pl. v.
 Reprinted in Jour. de Zoologie, vi, pp. 385-389.
Baptornis advenus, new genus and species, is
 described.

1877 C
 Notice of a new and gigantic dino-
 saur.
 Amer. Jour. Sci. (3), xiv, pp. 87-88.
 Reprinted in Jour. de Zoologie, vi, pp. 248-250.
Titanosaurus montanus described.

- Marsh, O. C.—Continued.** 1877 D
New vertebrate fossils.
Amer. Jour. Sci. (3), xiv, pp. 249-256.
Notice of this paper occurs in Amer. Naturalist, xi, p. 629.
- 1877 E
Introduction and succession of vertebrate life in America. Vice-president's address before Amer. Assoc. Adv. Science, 1877.
Amer. Jour. Sci. (3), xiv, pp. 337-378.
Proc. Amer. Assoc. Adv. Science, Nashville meeting, 1877, pp. 211-258; published 1878 (Marsh, 1878 G).
For reprints, see Marsh, 1884 F, p. 234.
- 1877 F
New order of extinct *Reptilia* (*Stegosauria*) from the Jurassic of the Rocky Mountains.
Amer. Jour. Sci. (3), xiv, pp. 513-514.
- 1877 G
Notice of new dinosaurian reptiles from the Jurassic formation.
Amer. Jour. Sci. (3), xiv, pp. 514-516.
- 1877 H
Brain of *Coryphodon*.
Amer. Naturalist, xi, p. 375.
A criticism on Professor Cope's paper in same journal, xi, p. 312.
- 1878 A
New species of *Ceratodus*, from the Jurassic.
Amer. Jour. Sci. (3), xv, p. 76.
Describes *Ceratodus guntheri*.
- 1878 B
Notice of new dinosaurian reptiles.
Amer. Jour. Sci. (3), xv, pp. 241-244, with 2 figs. in the text.
Abstract in Pop. Sci. Rev., London, 1878, pp. 210-211.
- 1878 C
Notice of new fossil reptiles.
Amer. Jour. Sci. (3), xv, pp. 409-411.
- 1878 D
Fossil mammal from the Jurassic of the Rocky Mountains.
Amer. Jour. Sci. (3), xv, p. 459.
Reprinted in Ann. and Mag. Nat. Hist. (5), vol. ii, p. 108; Pop. Sci. Rev., London, 1878, pp. 322-323.
Describes *Dryolestes priscus* Marsh.
- 1878 E
New pterodactyle from the Jurassic of the Rocky Mountains.
Amer. Jour. Sci. (3), xvi, pp. 233-234.
Abstracts in Neues Jahrb. Mineral., 1878, p. 895; Pop. Sci. Rev., London, 1878, p. 436.
Describes *Pteryodactylus montanus*.
- Marsh, O. C.—Continued.** 1878 F
Principal characters of American Jurassic dinosaurs. Part I.
Amer. Jour. Sci. (3), xvi, pp. 411-416, pls. iv-x.
Abstract in Neues Jahrb. Mineral., 1880, pp. 256-257.
- 1878 G
The introduction and succession of vertebrate life in America.
Proc. Amer. Assoc. Adv. Science, 26th meeting, Nashville, 1877, pp. 211-258.
Also Pop. Sci. Month., xii, pp. 513-527; 672-697.
Vice-presidential address before Amer. Assoc. Adv. Sci., 1877. Same as Marsh, 1877 E, with footnotes.
- 1878 H
Brain of a fossil mammal.
Nature, xvii, p. 340.
On the brain of *Coryphodon*.
- 1879 A
A new order of extinct reptiles (*Sauranodonta*) from the Jurassic formation of the Rocky Mountains.
Amer. Jour. Sci. (3), xvii, pp. 85-86.
Abstract in Ann. and Mag. Nat. Hist. (5), iii, pp. 175-176; Pop. Sci. Rev., London, 1879, p. 205.
- 1879 B
Principal characters of American Jurassic dinosaurs. Part II.
Amer. Jour. Sci. (3), xvii, 86-92, with pls. iii-x.
Abstract in Neues Jahrb. Mineral., 1880, pp. 257-258.
- 1879 C
The vertebræ of recent birds.
Amer. Jour. Sci. (3), xvii, 266-269, with 5 figs. in text.
- 1879 D
Polydactyle horses, recent and extinct.
Amer. Jour. Sci. (3), xvii, 499-505, with text figures.
Reprinted in Kosmos, v, pp. 432-438. Abstracts in Pop. Sci. Rev., London, 1879, pp. 318-319; Neues Jahrb. Mineral., 1881, pp. 103-104.
- 1879 E
Notice of a new Jurassic mammal.
Amer. Jour. Sci. (3), xviii, pp. 60-61.
Reprinted in Ann. and Mag. Nat. Hist. (5), iv, pp. 167-168; Geol. Magazine (2), vi, pp. 371-372.
Describes new genus *Stylacodon*, with new species *S. gracilis*. New family *Stylodontidae* proposed.

Marsh, O. C.—Continued. 1879 F

Additional remains of Jurassic mammals.

Amer. Jour. Sci. (3), xviii, 215-216, with 1 fig. in text.

Abstract in Pop. Sci. Rev., Lond., 1879, p. 428.

1879 G

Notice of new Jurassic mammals.

Amer. Jour. Sci. (3), pp. xviii, 396-398, with 1 fig. in text.

1879 H

Notice of new Jurassic reptiles.

Amer. Jour. Sci. (3), xviii, pp. 501-505, with pl. iii and 1 text fig.

1879 I

History and methods of palæontological discovery.

Amer. Jour. Sci. (3), xviii, pp. 323-359.

Reprinted in Nature, xx, pp. 494-499; 515-521. Kosmos, vi, pp. 339-352, 425-445, 1880; Proc. Amer. Assoc. Adv. Sci., xxviii, pp. 1-42, Salem, 1880; Pop. Sci. Month., xvi, pp. 219-236; 363-380.

1880 A

New characters of mosasauroid reptiles.

Amer. Jour. Sci. (3), xix, pp. 83-87, with pl. i and 4 figs. in text.

Abstract in Neues Jahrb. Mineral., 1880, pp. 104-105.

1880 B

The limbs of *Sauranodon*, with notice of a new species.

Amer. Jour. Sci. (3), xix, pp. 169-171, with 1 fig. in text.

For notice of this paper, by C. G. Giebel, see Zeitschr. gesamt. Naturwiss. (3), v, p. 357, 1880; Abstracts in Kosmos, vii, pp. 74-77; Neues Jahrb. Mineral., 1880, pp. 105-106.

1880 C

Principal characters of American Jurassic dinosaurs. Part III.

Amer. Jour. Sci. (3), xix, pp. 253-259, with pls. vi-xi.

Abstract in Neues Jahrb. Mineral., 1880, pp. 106-107.

1880 D

The sternum in dinosaurian reptiles.

Amer. Jour. Sci. (3), xix, pp. 395-396, with pl. xviii.

For synopses of this paper, see Kosmos, vii, p. 317; Neues Jahrb. Mineral., 1881, pp. 104-105.

1880 E

Note on *Sauranodon*.

Amer. Jour. Sci. (3), xix, p. 491.

Notes change of name to *Baptanodon*.

Marsh, O. C.—Continued. 1880 F

Notice of Jurassic mammals representing two new orders.

Amer. Jour. Sci. (3), xx, pp. 235-239, with 1 fig. in the text.

Abstract in Arch. Sci. Phys. et Nat., Geneva, 1880, iv, pp. 420-422.

1880 G

Odontornithes: A monograph on the extinct toothed birds of North America, with 34 plates and 40 woodcuts.

Report of the geological exploration of the 40th parallel, by Clarence King; pp. i-xv; 1-201. Washington, 1880.

For abstracts, see Marsh, O. C., 1898 D. p. 26.

1880 H

List of genera established by Prof. O. C. Marsh, 1862-1879.

Pp. 1-12. No date, but probably issued near beginning of year 1880. For continuation of the list, see Marsh, O. C., 1889 I.

1881 A

Principal characters of American Jurassic dinosaurs. Part IV. Spinal cord, pelvis, and limbs of *Stegosaurus*.

Amer. Jour. Sci. (3), xxi, pp. 167-170, with pls. vi-viii.

See also Kosmos, ix, pp. 319-321; Neues Jahrb. Mineral., 1881, pp. 109-110, 270-271.

1881 B

New order of extinct Jurassic reptiles (*Cœluria*).

Amer. Jour. Sci. (3), xxi, pp. 339-340, with pl. x.

Reprinted in Kosmos, ix, pp. 464-465.

1881 C

Discovery of a fossil bird in the Jurassic of Wyoming.

Amer. Jour. Sci. (3), xxi, pp. 341-342.

Reprinted in Ann. and Mag. Nat. Hist. (5), vii, 1881, pp. 488-489.

Describes *Laopteryx priscus* Marsh.

1881 D

Note on American pterodactyls.

Amer. Jour. Sci. (3), xxi, pp. 342-343.

Abstract in Neues Jahrb. Mineral., 1881, p. 415.

1881 E

Principal characters of American Jurassic dinosaurs. Part V.

Amer. Jour. Sci. (3), xxi, pp. 417-423; pls. xii-xviii, with 7 plates.

1881 F

New Jurassic mammals.

Amer. Jour. Sci. (3), xxi, pp. 511-513.

Marsh, O. C.—Continued. 1881 G
Restoration of *Dinoceras mirabile*.
Amer. Jour. Sci. (3), xxii, pp. 31-32, with
pl. ii.
Abstract in Archiv. Sci. Phys. et Nat., Geneva,
vi, 1881, pp. 323-324.

1881 H
Jurassic birds and their allies.
Amer. Jour. Sci. (3), xxii, pp. 337-340.
Reprinted in Pop. Sci. Month., xx, pp. 312-
315; Science (1), ii, pp. 512-513; Geol. Magazine
(2), viii, pp. 485-487; Nature, xxv, pp. 22-23;
Kosmos, x, pp. 231-234; Ann. and Mag. Nat.
Hist. (5), viii, pp. 451-455.

1882 A
Classification of the *Dinosauria*.
Amer. Jour. Sci. (3), xxiii, pp. 81-86.
Read before the National Acad. Sci., Nov.
14, 1881.
Reprinted in Kosmos, v, pp. 382-387;
Geol. Magazine (2), ix, pp. 80-85; Ann. and
Mag. Nat. Hist. (5), ix, pp. 79-84; Nature, xxv,
pp. 244-246.

1882 B
The wings of pterodactyles.
Amer. Jour. Sci. (3), xxiii, pp. 251-256, with
pl. iii.
See also Geol. Magazine (2), ix, pp. 205-210;
Kosmos, vi, pp. 103-108; and Nature, xxv, pp.
531-533.

Describes *Rhamphorhynchus phyllurus* Marsh.

1882 C
Jurassic birds and their allies.
Report Brit. Assoc. Adv. Sci., 51st meeting,
York, 1881, pp. 661-662.
Same as Marsh, O. C., 1881 H.

1883 A
Principal characters of American
Jurassic dinosaurs. Part VI. Restora-
tion of *Brontosaurus*.

Amer. Jour. Sci., (3), xxvi, pp. 81-85, with
pl. i.
See also Geol. Magazine for 1883, pp. 386-388.

1883 B
On the supposed human footprints
recently found in Nevada.

Amer. Jour. Sci. (3), xxvi, pp. 139-140, with
2 figs. in the text.

Abstract in Nature, xxviii, pp. 370-371;
Neues Jahrb. Mineral., 1884, pp. 262-263.

1883 C
Birds with teeth.
Third annual report of the U. S. Geol. Surv.
to the Secretary of the Interior, 1881-82, by J.
W. Powell, director, Washington, 1883, pp. 45-
88, with 33 figs. in the text.

Marsh, O. C.—Continued. 1884 A
Principal characters of American
Jurassic dinosaurs. Part VII. On the
Diplodocidæ, a new family of the *Sau-
ropoda*.

Amer. Jour. Sci. (3), xxvii, pp. 160-168, with
pls. iii and iv.

Abstract with 3 figures in Science, iii, p. 199;
Kosmos, ii, pp. 350-357. Notice by Cope, Amer.
Naturalist, xix, p. 67. Reproduced in Geol.
Magazine (2), x, pp. 99-107, with 10 figs. in the
text.

1884 B
Principal characters of American
Jurassic dinosaurs. Part VIII. The
order of *Theropoda*.

Amer. Jour. Sci. (3), xxvii, pp. 329-340, with
pls. viii-xiv.

Abstract with figures in Science, iii, pp. 542-
544; Kosmos, ii, pp. 357-365. Reprinted in Geol.
Magazine (3), i, pp. 252-262. Notice by Cope in
Amer. Naturalist, xix, p. 67.

1884 C
A new order of extinct Jurassic rep-
tiles.
Amer. Jour. Sci. (3), xxvii, p. 341, with 1
text fig.

1884 D
Principal characters of American
Cretaceous pterodactyls. Part I. The
skull of *Pteranodon*.

Amer. Jour. Sci. (3), xxvii, pp. 422-426, with
pl. xv.

Reprinted in Geol. Magazine (3), i, pp. 345-
348.

1884 E
On the united metatarsal bones of
Ceratosaurs.

Amer. Jour. Sci. (3), xxviii, pp. 161-162,
with 2 figs. in the text.

1884 F
Dinocerata. A monograph of an
extinct order of gigantic mammals.

Monographs U. S. Geol. Surv., x, pp. i-xviii;
1-237, with 56 pls. and 200 woodcuts in text.
Washington, D. C.

Reviewed in Geol. Magazine, (3), ii, 1885,
pp. 212-228, with many figures reproduced.

Abstracts in Amer. Jour. Sci. (3), xxix, pp.
173-204; Geol. Magazine (3), ii, pp. 212-228; Na-
ture, xxxii, pp. 97-99; Pop. Sci. Month., xxviii,
pp. 133-134; Neues Jahrb. Mineral., 1886, i, pp.
339-341; Ann. Sci. Géol., Paris, xvii, pp. 1-11.

1884 G
The classification and affinities of
the dinosaurian reptiles.

Nature, xxxi, pp. 68-69.

Abstract in Science, iy, p. 261.

Read before Brit. Assoc. Adv. Sci., Montreal
meeting, 1884.

- Marsh, O. C.—Continued.** 1885 A
Names of extinct reptiles.
Amer. Jour. Sci. (3), xxix, p. 169.
- 1885 B
The gigantic mammals of the order
Dinocerata.
Fifth Annual Report of the U. S. Geol.
Surv., Washington, D. C., 1885, pp. 243-302, with
100 figs. in the text.
- 1885 C
On American Jurassic mammals.
Report Brit. Assoc. Adv. Sci., 54th meeting,
Montreal, 1884, pp. 734-736.
Illustrated with a geological section.
- 1885 D
On the classification and affinities of
dinosaurian reptiles.
Report Brit. Assoc. Adv. Sci., 54th meeting,
Montreal, 1884, pp. 763-765.
Same as Marsh, O. C., 1884 G.
- 1887 A
American Jurassic mammals.
Amer. Jour. Sci. (3), xxxiii, pp. 326-348,
with pls. vii-x.
See also Geol. Magazine (3), iv, 1887, pp.
242-247, 289-299, pls. vii-ix.
- 1887 B
Notice of new fossil mammals.
Amer. Jour. Sci. (3), xxxiv, pp. 323-331,
with 12 figs. in the text.
- 1887 C
Principal characters of American
Jurassic dinosaurs. Part IX. The
skull and dermal armor of *Stegosaurus*.
Amer. Jour. Sci. (3), xxxiv, pp. 413-417,
with pls. vi-ix.
Reprinted in Geol. Magazine (3), v, pp. 11-15.
- 1888 A
Notice of a new genus of *Sauropoda*
and other new dinosaurs from the
Potomac formation.
Amer. Jour. Sci. (3), xxxv, pp. 89-94, with 9
figs. in the text.
- 1888 B
Notice of a new fossil sirenian from
California.
Amer. Jour. Sci. (3), xxxv, pp. 94-96, with 3
figs. in the text.
- 1888 C
A new family of horned dinosaurs
from the Cretaceous.
Amer. Jour. Sci. (3), xxxvi, pp. 477-478, with
pl. xi.
- 1888 D
The skull and dermal armor of
Stegosaurus.
Geol. Magazine (3), v, pp. 11-15, pls. i-iii,
and 3 figs. in the text.
- Marsh, O. C.—Continued.** 1889 A
Restoration of *Brontops robustus*, from
the Miocene of America.
Amer. Jour. Sci. (3), xxxvii, pp. 163-165,
with pl. vi.
Reprints in Rep. Brit. Assoc. for 1888, pp.
706-707, 1889; Geol. Magazine (3), vi, pp. 99-101.
- 1889 B
Comparison of the principal forms of
the *Dinosauria* of Europe and America.
Amer. Jour. Sci. (3), xxxvii, pp. 323-331.
Also in Geol. Magazine (3), vi, pp. 204-210.
- 1889 C
Notice of new American dinosaurs.
Amer. Jour. Sci. (3), xxxvii, pp. 331-336,
with figs. 1-5.
- 1889 D
Discovery of Cretaceous *Mammalia*.
Amer. Jour. Sci. (3), xxxviii, pp. 81-92, with
pls. ii-v.
Review by W. Dames in Neues Jahrb. Min-
eral., 1890, pp. 141-143.
- 1889 E
Notice of gigantic horned *Dinosauria*
from the Cretaceous.
Amer. Jour. Sci. (3), xxxviii, pp. 173-175,
with 1 text fig.
- 1889 F
Discovery of Cretaceous *Mammalia*,
pt. ii.
Amer. Jour. Sci. (3), xxxviii, pp. 177-180,
with pls. vii-viii.
For review by W. Dames see Neues Jahrb.
Mineral., 1890, pp. 141-143.
- 1889 G
Skull of the gigantic *Ceratopsidae*.
Amer. Jour. Sci. (3), xxxviii, pp. 501-506,
with pl. xii.
Reprinted in Geol. Magazine (3), vii, pp. 1-5,
pl. i.
- 1889 H
Restoration of *Brontops robustus* from
the Miocene of America.
Report Brit. Assoc. Adv. Sci., 58th meeting,
Bath, 1888, pp. 706-707.
Same as Marsh, O. C., 1889 A.
- 1889 I
Additional genera established by
Prof. O. C. Marsh, 1880-1889.
Pp. 13-17.—Issued privately, probably toward
end of year 1889. No date. A list of proposed
genera, with derivations and place of publica-
tion. For beginning of list see Marsh, O. C.,
1880 H.
- 1890 A
Description of new dinosaurian rep-
tiles.
Amer. Jour. Sci. (3), xxxix, pp. 81-86, with
pl. i.

- Marsh, O. C.—Continued.** 1890 B
Distinctive characters of the order
Hallopoda.
Amer. Jour. Sci. (3), xxxix, pp. 415-417, with
1 text figure.
- 1890 C
Additional characters of the *Ceratop-*
sidae, with notice of new Cretaceous
dinosaurs
Amer. Jour. Sci. (3), xxxix, 418-426, with
pls. v-vii.
- 1890 D
Notice of new Tertiary mammals.
Amer. Jour. Sci. (3), xxxix, pp. 523-525.
- 1890 E
Notice of some extinct *Testudinata*.
Amer. Jour. Sci. (3), xl, pp. 177-179, with
pls. vii, viii.
- 1890 F
The skull of the gigantic *Ceratopsidae*.
Geol. Magazine (3), vii, pp. 1-5, pl. i.
- 1891 A
A horned artiodactyle (*Protoceras*
celer) from the Miocene.
Amer. Jour. Sci. (3), xli, pp. 81-82.
- 1891 B
The gigantic *Ceratopsidae*, or horned
dinosaurs of North America.
Amer. Jour. Sci. (3), xli, pp. 167-178, pls. i-x.
Reprinted in Geol. Magazine (3), viii, pp.
193-199, text figs. 1-19, pls. iv, v; pp. 241-248,
text figs. 1-34.
- 1891 C
Restoration of *Triceratops* [and *Bron-*
tosaurus].
Amer. Jour. Sci. (3), xli, pp. 339-342, with
pls. xv, xvi.
Reprinted in part in Geol. Magazine (3), viii,
pp. 248-250, pl. vii.
- 1891 D
Restoration of *Stegosaurus*.
Amer. Jour. Sci. (3), xlii, pp. 179-181, with
pl. ix.
Reprinted in Geol. Magazine (3), viii, pp.
385-387, pl. xi.
- 1891 E
Notice of new vertebrate fossils.
Amer. Jour. Sci. (3), xlii, pp. 265-269.
- 1891 F
Geological horizons as determined
by vertebrate fossils.
Amer. Jour. Sci. (3), xlii, pp. 336-338, with
pl. xii.
See also *Compte rend. Cong. Géolog. Inter-*
nat., Washington, 1891, pp. 156-159, 1893.
- Marsh, O. C.—Continued.** 1891 G
On the gigantic *Ceratopsidae* (or
horned lizards) of North America.
Report of Brit. Assoc. Adv. Sci., 60th meet-
ing, Leeds, 1890, pp. 793-795.
Same as Marsh, O. C., 1891 B.
- 1891 H
On the Cretaceous mammals of North
America.
Report Brit. Assoc. Adv. Sci., 60th meeting,
Leeds, 1890, pp. 853-854.
- 1891 I
Note on Mesozoic *Mammalia*.
Proc. Acad. Nat. Sci. Phila., 1891, pp. 237-
241.
Also in Amer. Naturalist, vol. xxv, pp. 611-
616.
A reply to Osborn, H. F., 1891 A.
- 1891 J
Restoration of *Stegosaurus*.
Geol. Magazine (3), viii, pp. 385-387, with
pl. xi.
- 1892 A
The skull of *Torosaurus*.
Amer. Jour. Sci. (3), xliii, pp. 81-84, with
pls. ii, iii.
- 1892 B
Discovery of Cretaceous *Mammalia*.
Part iii.
Amer. Jour. Sci. (3), xliii, pp. 249-262, with
pls. v-xi.
- 1892 C
Recent polydactyle horses.
Amer. Jour. Sci. (3), xliii, pp. 339-355, with
21 figs. in the text.
- 1892 D
A new order of extinct Eocene mam-
mals (*Mesodactyla*).
Amer. Jour. Sci. (3), xliii, pp. 445-449, with
2 figs. in the text.
- 1892 E
Notice of new reptiles from the Laramie
formation.
Amer. Jour. Sci. (3), xliii, pp. 449-453, with
text figs. 1-4.
- 1892 F
Notes on Triassic *Dinosauria*.
Amer. Jour. Sci. (3), xliii, pp. 543-546, with
pls. xv-xvii.
- 1892 G
Notes on Mesozoic vertebrate fossils.
Amer. Jour. Sci. (3), xlii, pp. 171-176, with
pls. ii-v.
- 1892 H
Restorations of *Claosaurus* and *Cerato-*
saurus.
Amer. Jour. Sci. (3), xlii, pp. 343-350, with
pls. vi-viii.

- Marsh, O. C.—Continued.** 1892 I
Restoration of *Mastodon americanus*,
Cuvier.
Amer. Jour. Sci. (3), xlv, p. 350, with pl.
viii.
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- 1893 A
A new Cretaceous bird, allied to
Hesperornis.
Amer. Jour. Sci. (3), xlv, pp. 81-82, with 3
figs. in the text.
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- 1893 B
The skull and brain of *Claosaurus*.
Amer. Jour. Sci. (3), xlv, pp. 83-86, with
pls. iv, v.
-
- 1893 C
Restoration of *Coryphodon*.
Amer. Jour. Sci. (3), xlvi, pp. 321-326, with
pls. v, vi.
-
- 1893 D
Description of Miocene *Mammalia*.
Amer. Jour. Sci. (3), xlvi, pp. 407-412, with
pls. vii-x.
-
- 1893 E
Restoration of *Mastodon americanus*,
Cuvier.
Geol. Magazine (3), x, p. 164, pl. viii. Same
as Marsh, O. C., 1892 I.
-
- 1893 F
Restorations of *Anchisaurus*, *Cerato-*
saurus, and *Claosaurus*.
Geol. Magazine (3), x, pp. 150-157, pls. vi
and vii, and 1 fig. in the text.
-
- 1893 G
Restoration of *Anchisaurus*.
Amer. Jour. Sci. (3), xlv, pp. 169-170, with
pl. vi.
-
- 1893 H
Restoration of *Coryphodon*.
Geol. Magazine (3), x, pp. 482-487, pl. xviii,
and 6 figs. in the text.
-
- 1893 I
Some recent restorations of dino-
saurs.
Nature, xlviii, pp. 437-438.
A correction of some errors in R. Lydekker's
paper in Nature, xlviii, p. 302.
-
- 1893 J
Discussion sur la corrélation des
roches élastiques.
Compte rend. Cong. Géol. Internat., Wash-
ington, 1891, pp. 156-159.
-
- 1894 A
Restoration of *Camptosaurus*.
Amer. Jour. Sci. (3), xlvii, pp. 245-246, with
pl. vi.

- Marsh, O. C.—Continued.** 1894 B
Restoration of *Elotherium*.
Amer. Jour. Sci. (3), xlvii, pp. 407-408, with
pl. ix.
-
- 1894 C
A new Miocene mammal.
Amer. Jour. Sci. (3), xlvii, p. 409, with 3
figs. in the text.
Describes *Heptacodon curtus*.
-
- 1894 D
Footprints of vertebrates in the Coal-
measures of Kansas.
Amer. Jour. Sci. (3), xlviii, pp. 81-84, with
pls. ii, iii.
-
- 1894 E
The typical *Ornithopoda* of the Amer-
ican Jurassic.
Amer. Jour. Sci. (3), xlviii, pp. 85-90, with
pls. iv-vii.
-
- 1894 F
Eastern division of the Miohippus
beds, with notes on some of the char-
acteristic fossils.
Amer. Jour. Sci. (3), xlviii, pp. 91-94, with
2 figs. in the text.
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- 1894 G
Restoration of *Camptosaurus*.
Geol. Magazine (3), i, pp. 193-195, with
pl. vi.
Same as Marsh, O. C., 1894 A.
-
- 1894 H
Restoration of *Elotherium*.
Geol. Magazine (4), i, pp. 294-295, with
pl. x.
Same as Marsh, O. C., 1894 B.
-
- 1894 I
Footprints of vertebrates in the Coal-
measures of Kansas.
Geol. Magazine (3), i, pp. 337-339, with
pl. xi.
Descriptions and figures of several species.
The same, in part, as Marsh, O. C., 1894 D.
-
- 1894 J
A gigantic bird from the Eocene of
New Jersey.
Amer. Jour. Sci. (3), xlviii, p. 344, with 5
figs. in the text.
Describes new genus and species, *Barornis*
regens.
-
- 1894 K
Miocene artiodactyles from the east-
ern Miohippus beds.
Amer. Jour. Sci. (3), xlviii, pp. 175-178,
with 7 figs. in the text.
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- 1894 L
Description of Tertiary artiodac-
tyles.
Amer. Jour. Sci. (3), xlviii, pp. 259-274, with
34 figs. in the text.

- Marsh, O. C.—Continued.** 1894 M
A new Miocene tapir.
Amer. Jour. Sci. (3), xlviii, p. 348.
Describes *Tanyops undans* from South Dakota.
- 1895 A
The *Reptilia* of the Baptonodon beds.
Amer. Jour. Sci. (3), 1, pp. 405-406, with 3 figs. in the text.
Figures and describes hind paddle of *Baptonodon discus* and vertebræ of *B. natans* and of *Pantosaurus* (*Parasaurus*) *striatus*.
- 1895 B
Restoration of some European dinosaurs, with suggestions as to their place among the *Reptilia*.
Amer. Jour. Sci. (3), 1, pp. 407-412, with pls. v-viii, and 1 fig. in the text.
Also in Report Brit. Assoc. Adv. Sci., Ipswich, 1895, pp. 685-688; and Geol. Magazine (4), iii, pp. 1-8, figs. 1, 2 and pls. i-iv.
- 1895 C
On the affinities and classification of the dinosaurian reptiles.
Amer. Jour. Sci. (3), 1, pp. 483-498, with pl. x.
Abstract of paper read before International Congress of Zoologists, Leyden, 1885. See also Marsh, O. C., 1896 D, Marsh, O. C., 1896 A, and Marsh, O. C., 1896 D.
- 1895 D
Fossil vertebrates.
Johnson's Universal Cyclopædia, viii, pp. 491-498, with double plate containing 16 figs., and 48 figs. in the text.
- 1896 A
Restoration of some European dinosaurs, with suggestions as to their place among the *Reptilia*.
Geol. Magazine (4), iii, pp. 1-9, pls. 1-iv.
See also Marsh, O. C., 1895 C.
- 1896 B
A new Belodont reptile (*Stegomus*) from the Connecticut River sandstone.
Amer. Jour. Sci. (4), ii, pp. 59-62, with 3 figs. in the text.
Describes *Stegomus arcuatus*.
- 1896 C
The dinosaurs of North America.
Sixteenth Annual Report U. S. Geol. Surv., 1894-95, part i, pp. 133-244, with pls. ii-lxxxv, and text figs. 1-66.
- 1896 D
On the affinities and classification of dinosaurian reptiles.
Compte rendu des séances du troisième Congrès International de Zoologie, Leyden, 1895, pp. 196-211, with 1 pl. and 11 figs. in the text.
See also Marsh, O. C., 1895 A and 1895 C.
- Marsh, O. C.—Continued.** 1896 E
The geology of Block Island.
Amer. Jour. Sci. (4), ii, pp. 295-298.
- 1896 F
The Jurassic formation on the Atlantic coast.
Amer. Jour. Sci. (4), ii, pp. 433-447, with 2 figs. in text showing relationships of the strata.
See also Science (2) iv, pp. 805-816, figs. 1-2.
- 1896 G
Amphibian footprints from the Devonian.
Amer. Jour. Sci. (4), ii, pp. 374-375, with 1 fig. of footprint of *Thinopus antiquus*.
- 1897 A
Affinities of *Hesperornis*.
Amer. Jour. Sci. (4), iii, pp. 347-348.
- 1897 B
The *Stylinodontia*, a suborder of Eocene Edentates.
Amer. Jour. Sci. (4), iii, pp. 137-146, with 9 figs. in the text.
- 1897 C
Vertebrate fossils of the Denver Basin.
Monographs U. S. Geol. Surv., xxvii, pp. 473-527, with pls. xxi-xxxi and text figs. 23-102.
- 1897 D
Principal characters of the *Protoceratidæ*.
Amer. Jour. Sci. (4), iv, pp. 165-176, with pls. ii-vii, with 7 figs. in the text.
- 1897 E
Recent observations on European dinosaurs.
Amer. Jour. Sci. (4), iv, pp. 413-416.
- 1898 A
New species of *Ceratopsia*.
Amer. Jour. Sci. (4), vi, p. 92.
Describes *Triceratops calicornis* and *T. obtusus*.
- 1898 B
The origin of mammals.
Amer. Jour. Sci. (4), vi, pp. 406-409.
Remarks made at International Congress of Zoologists, Cambridge, Eng., 4th meeting, Proceedings, pp. 71-74. See also Science (2), viii, pp. 953-955.
- 1898 C
On the families of sauropodous *Dinosauria*.
Amer. Jour. Sci. (4), vi, pp. 487-488.
Also in Report Brit. Assoc. Adv. Sci. for 1898 (1899), pp. 909-910. Geol. Magazine (4), vi, 1899, pp. 157-158.

Marsh, O. C.—Continued. 1898 D

List of scientific publications of Othniel Charles Marsh, professor of palæontology in Yale University, 1861–1896.

Pp. 1–49, with two supplements (pp. 50–53), which extend the list to the end of 1898. Issued privately. See Marsh, O. C., 1889, I.

1898 E

Comparative value of fossils in chronology.

Geol. Magazine (4), v, pp. 565–568.

1899 A

Footprints of Jurassic dinosaurs.

Amer. Jour. Sci. (4), vii, pp. 227–232, with pl. v, and 3 figs. in the text.

Reviewed in Neues Jahrb. Mineral., 1901, ii, p. 305.

1899 B

Note on a Bridger Eocene carnivore.

Amer. Jour. Sci. (4), vii, p. 397.

Refers *Limnocyon riparius* Marsh to the new genus *Telmatocon*.

Marshall, William. 1872 A

Beobachtungen über den Vogel-schwanz.

Niederländisches Archiv Zoologie, i, pp. 194–210, with pl. xvi

Martin, K. 1873 A

Ein Beitrag zur Kenntniss fossiler Eganoiden.

Zeitschr. deutsch. geol. Gesellsch., xxv, pp. 699–735, with pl. xxii.

Treats of the anatomy of *Palæoniscus*, *Acrolepis*, *Amblypterus*, *Pygopterus*, etc.

According to Traquair this paper contains many errors.

Martin, W. 1836 A

On the osteology of the sea otter, *Enhydra marina* Flem.

Proc. Zool. Soc. Lond., 1836, iv, pp. 59–62.

Martins, Charles. 1874 A

Sur l'ostéologie des membres antérieurs de l'ornithorynque et de l'échidne comparée à celle des membres correspondants dans les reptiles, les oiseaux et les mammifères.

Assoc. française pour les sciences, 2d session, Lyon, 1873, pp. 533–539.

Mason, William D. H. 1878 A

Letter on the batrachian foot tracks from the Ellengowan shaft in Schuylkill County, dated April 5, 1878.

Proc. Amer. Philos. Soc., xvii, pp. 716–719, 725.

Mather, W. W. 1835 A

[Note on sharks' teeth.]

Amer. Jour. Sci., xxviii, p. 378, with two woodcuts.

Mather, W. W.—Continued. 1838 A

[Letter to editor on bones and teeth of "*Elephas jacksoni*" found in Ohio.]

Amer. Jour. Sci., xxxiv, pp. 362–364, with 3 figs. in the text.

For additional information of these remains, without name, see Mather's First Ann. Rep. Geol. Surv., Ohio, 1838, p. 96. The same is reprinted in Amer. Jour. Sci., xxxiv, p. 358.

Matthew, G. F. 1886 A

Discovery of a Pteraspidian fish in the Silurian rocks of New Brunswick.

Canadian Record of Science, ii, pp. 251–252, with fig. in the text.

Describes finding of *Pteraspis? acadica*.

1887 A

Additional note on the Pteraspidian fish found in New Brunswick.

Canadian Record of Science, ii, pp. 323–326, with 1 fig. in the text.

Refers to *Pteraspis? acadica* (*Cyathaspis acadica*).

1887 B

A preliminary notice of a new genus of Silurian fishes.

Bull. Nat. Hist. Soc. New Brunswick, vi, pp. 69–73, with 1 fig. in the text.

The new genus *Diplaspis* is proposed, with *D. acadica* as type.

1888 A

On some remarkable organisms of the Silurian and Devonian rocks in southern New Brunswick.

Trans. Roy. Soc. Canada, vi, pp. 49–62, with pl. iv.

Has description and figures of *Diplaspis acadica* and comparison with *Palæaspis americana*.

1891 A

[A letter to the American Geologist regarding the age of the Silurian fish, *Diplaspis acadica*.]

Amer. Geologist, viii, pp. 61–62.

Matthew, W. D. 1897 A

Development of the foot in the *Palæosyopinae*.

Amer. Naturalist, xxxi, pp. 57–58.

Reviewed by M. Schlosser in Neues Jahrb. Mineral., 1901, i, p. 148.

1897 B

On the status of the Puerco fauna.

Anatom. Anzeiger, xiv, pp. 231–232.

See also Science (2), vi, p. 852.

Preliminary report of a paper read before the New York Academy of Sciences.

1897 C

A revision of the Puerco fauna.

Bull. Amer. Mus. Nat. Hist., ix, pp. 259–323, with 20 figs. in the text.

Reviewed by Schlosser in Neues Jahrb. Mineral., 1900, i, Ref., pp. 299–308.

- Matthew, W. D.**—Continued. 1898 A
On some new characters of *Clænodon*
and *Oxyæna*.
Science (2), viii, p. 880.
A brief abstract.
- 1898 B
[Remarks on *Mixodectes*.]
Trans. N. Y. Acad. Sci., xvi, pp. 369-370.
- 1899 A
A provisional classification of the
fresh-water Tertiary of the West.
Bull. Amer. Mus. Nat. Hist., xii, pp. 19-75.
Presents lists of mammals occurring in each
of the formations of each of the basins.
See also **Wortman** and **Matthew**.
- Maxwell, J. B.** 1845 A
[A letter concerning the discovery of
mastodon bones near Hackettstown,
N. J.]
Proc. Amer. Philos. Soc., iv, pp. 118-121; 127.
Reprinted in Lond. and Edinb. Philos.
Mag., 1845, xxvi, pp. 453-456.
- Mayer, Paul.** 1886 A
Die unpaaren Flossen der Selachier.
Mittheil. Zoolog. Station zu Neapel, vi, pp.
217-285, with pls. 15-19.
Contains also a discussion of the "Halbwir-
bel der Selachier," p. 261.
Comments on by J. A. Ryder, Amer. Nat-
uralist, xx, p. 142.
- Mayer, —.** 1825 A
Die hintere Extremität der Ophidier.
Nova Acta Acad. Caes. Leop.-Car., xii, pp.
819-842, with pls. lxvi, lxvii.
- Mayo, Florence.** 1888 A
The superior incisors and canine
teeth of sheep.
Bull. Mus. Comp. Zool., xiii, pp. 247-258,
with pls. i-ii.
- Mehnert, Ernst.** 1887 A
Untersuchungen über die Entwick-
lung des Os pelvis der Vögel.
Morpholog. Jahrbuch, xiii, pp. 259-295, with
pls. viii-x and 4 figs. in the text.
Contains numerous citations of the litera-
ture of the development and homologies of
the pelvic bones.
- 1889 A
Untersuchungen über die Entwick-
lung des Beckengürtels bei einigen
Säugethieren.
Morpholog. Jahrbuch, xv, pp. 97-112, with
pl. vi.
Contains numerous references to the litera-
ture of the subject.
- Mehnert, Ernst**—Continued. 1890 A
Untersuchungen über die Entwick-
lung des Beckengürtels der *Emys tatarica*
taurica.
Morpholog. Jahrbuch, xvi, pp. 537-571, with
pl. xx.
Contains numerous references to the litera-
ture.
- Menzbier, M. v.** 1887 A
Vergleichende Osteologie der Pin-
guine in Anwendung zur Hauptein-
theilung der Vögel.
Bull. Soc. Imp. Natur. Moscou (n. s.), ii, pp.
483-587, with pl. viii.
- Mercer, H. C.** 1894 A
Reexploration of Hartman's Cave,
near Stroudsburg, Pa., in 1892.
Proc. Acad. Nat. Sci. Phila., 1894, pp. 96-104.
- 1895 A
A preliminary account of the reex-
ploration, in 1894 and 1895, of the
"Bone Hole," now known as Irwin's
Cave at Port Kennedy, Montgomery
County, Pa.
Proc. Acad. Nat. Sci. Phila., 1895, pp. 443-446.
- 1897 A
The finding of the fossil sloth at Big
Bone Cave, Tennessee, in 1896.
Proc. Amer. Philos. Soc., xxxvi, pp. 36-70,
with 26 half-tone figs. in the text.
- 1899 A
The bone cave at Port Kennedy, Pa.,
and its partial excavation in 1894, 1895,
and 1896.
Jour. Acad. Nat. Sci. Phila., xi, pp. 269-286,
with 11 text figs. and a chart of the cave.
Besides a description of the cave, a list of the
species recovered is given. These are described
in Cope, E. D., 1899 A.
- Merian, Peter.** 1875 A
Ueber einen angeblichen Embryo
von *Ichthyosaurus*.
Verhandl. naturf. Gesellsch. Basel, vi, pp.
343-344.
- Mermier, Élie.** 1896 A
Étude complémentaire sur l'*Acer-
atherium platyodon* de la Mollasse bur-
digalienne supérieure des environs de
Saint-Nazaire en Royans (Drôme).
Ann. Soc. Linn. de Lyon (n. s.), xliii, pp.
225-240, with pls. i, ii.
Additional observations are recorded on pp.
257-260.
- Merriam, C. Hart.** 1894 A
A new subfamily of murine rodents—
the *Neotominæ*—with descriptions of a

Merriam, C. Hart.—Continued.

new genus and species and a synopsis of the known forms.

Proc. Acad. Nat. Sci. Phila., 1894, pp. 225-252, with 5 figs. in text.

— 1895 A
Monographic revision of the pocket gophers, family *Geomysidae* (exclusive of the species of *Thomomys*).

N. A. Fauna, No. 8 (U. S. Dept. Agriculture), pp. 1-259, with pls. 1-19, maps 1-4, and text figs. 1-71.

— 1895 B
Revision of the shrews of the American genera *Blarina* and *Notiosorex*.

N. A. Fauna, No. 10 (U. S. Dept. Agriculture), pp. 1-34, with pls. 1-3.

— 1895 C
Synopsis of the American shrews of the genus *Sorex*.

N. A. Fauna, No. 10 (U. S. Dept. Agriculture), pp. 57-98, with pls. v-xii.

— 1896 A
Preliminary synopsis of the American bears.

Proc. Biolog. Soc. Washington, x, pp. 65-83, with pls. iv-vi, with 17 figs. in the text.

In this paper 10 species of bears are recognized as occurring in North America.

Merriam, J. C. 1894 A
Über die Pythonomorphen der Kan-sas Kreide.

Paläontographica, xli, pp. 1-39, with 4 pls. and 1 text fig.

— 1895 A
On some reptilian remains from the Triassic of northern California.

Amer. Jour. Sci. (3), pp. 55-57, with 2 figs. in the text.

Describes the new genus and species *Shastasauros pacificus*.

— 1896 A
Sigmogomphius lecontei, a new Castoroid rodent from the Pliocene near Berkeley, Cal.

Bulletin of the department of geology of the University of California, i, pp. 363-370, with 2 figs. in the text.

— 1899 A
Report on the expedition to the John Day fossil fields.

University Chronicle [Univ. of California], ii, pp. 217-224.

A general account of the region. No species are described.

Metschnikoff, Olga. 1879 A
Zur Morphologie des Becken- und Schulterbogens der Knorpelfische.
Zeitschr. wissenschaft. Zool., xxxiii, pp. 423-438, with pl. xxiv.

Mettam, A. E. 1895 A
The rudimentary metacarpal and metatarsal bones of the domestic ruminants.
Jour. Anat. and Physiol., xxix, pp. 244-253, with 6 figs. in the text.

Meyer, H. v. 1832 A
Cervus alces fossilis (fossiler Elenn).
Nova Acta Acad. Caes. Leop.-Car., xvi, pp. 463-486, with pl. xxxvii.

— 1834 A
Die fossilen Zähne und Knochen und ihre Ablagerung in der Gegend von Georgensmund in Bayern.
4to, pp. i-viii, 1-126, with pls. i-xiv.

— 1835 A
Ueber fossile Reste von Ochsen, deren Arten und das Vorkommen derselben.
Nova Acta Acad. Caes. Leop.-Car. xvii, pp. 101-170, with pls. viii-xii A.
Describes *Bos priscus*, and considers briefly *Bos pallasi* DeKay and *Bos bombifrons*. *Bos priscus* includes *Bison latifrons* of Harlan.

— 1840 A
[Letter to editor on Grateloup's genus *Squalodon*.]
Neues Jahrb. Mineral., 1840, pp. 587-588.

— 1841 A
[Letters to editor on *Protorosaurus*, *Squalodon*, and *Hyotherium*.]
Neues Jahrb. Mineral., 1841, pp. 101-104, 241-242.

— 1844 A
Ueber die fossilen Knochen aus dem Tertiär-Gebilde des Cerro de San Isidro bei Madrid.
Neues Jahrb. Mineral., 1844, pp. 289-310.
Contains description of *Anchitherium*.

— 1845 A
Zur Fauna der Vorwelt. Fossile Säugethiere, Vögel und Reptilien aus dem Molasse-Mergel von Oeningen.
Pp. i-vi, 1-52, with 12 pls. Frankfurt am Main, 1845.
Continued in Meyer, H. v. 1855 A, Meyer, H. v. 1856 B, and Meyer, H. v. 1860 D.

— 1845 B
Letter directed to Professor Brown.
Neues Jahrb. Mineral, 1845, pp. 308-313.
Contains remarks on *Mosasaurus maximiliani* and *M. missouriensis*.

- Meyer, H. v.—Continued.** 1847 A
Die erloschene Cetaceen-Familie der Zeuglodonten, mit *Zeuglodon* und *Squalodon*.
Neues Jahrb. Mineral., 1847, pp. 669-674.
- 1851 A
Pterodactylus (Rhamphorhynchus) gemmingeri.
Paläontographica, i, pp. 1-21, with pl. v.
- 1851 B
Ueber den *Archegosaurus* der Steinkohlenformation.
Paläontographica, i, pp. 209-215, with pl. xxxiii, figs. 15-17.
- 1852 A
Ueber die Beschaffenheit des Stosszahnes von *Elephas primigenius* in der Jugend.
Paläontographica, ii, pp. 75-77, with pl. xiv.
- 1852 B
Ueber *Chelydra murchisoni* und *Chelydra decheni*.
Paläontographica, ii, pp. 237-247, with pls. xxvi-xxx.
- 1854 A
Anthracotherium dalmatinum aus der Braunkohle des Monte Promina in Dalmatien.
Paläontographica, iv, pp. 61-66, with pl. xi.
- 1855 A
Zur Fauna der Vorwelt. Die Saurier des Muschelkalkes, mit Rücksicht auf die Saurier aus buntem Sandstein und Keuper.
Pp. i-viii; 1-167, with 70 pls. Frankfurt am Main, 1847-1855.
- 1856 A
Ueber den Jugendstand der *Chelydra decheni* aus der Braunkohle des Siebengebirges.
Paläontographica, iv, pp. 56-60.
- 1856 B
Zur Fauna der Vorwelt. Saurier aus dem Kupferschiefer der Zechstein-Formation.
Pp. i-vi; 1-28, with 9 pls. Frankfurt am Main, 1856.
- 1857 A
Reptilien aus der Steinkohlen-Formation in Deutschland.
Paläontographica, vi, pp. 59-219, with pls. viiia-xxiii.
- Meyer, H. v.—Continued.** 1858 A
Reptilien aus der Steinkohlen-Formation in Deutschland.
Pp. 1-126, with pls. A; i-xv. Cassel, 1858. Folio.
This memoir is devoted to descriptions and illustrations of *Archegosaurus* and its species.
- 1860 A
Rhamphorhynchus gemmingeri.
Paläontographica, vii, pp. 79-89; pl. xii.
- 1860 B
Frösche aus Tertiär-Gebilden Deutschlands.
Paläontographica, vii, 123-182; pls. xvi-xxii.
- 1860 C
Saurier aus der Tuff-Kreide von Mästricht und Folx-les-Caves.
Paläontographica, vii, pp. 241-244; pl. xxvi.
- 1860 D.
Zur Fauna der Vorwelt. Reptilien aus dem lithographischen Schiefer des Jura in Deutschland und Frankreich.
Pp. i-viii; 1-142, with 21 pls. Frankfurt am Main, 1860.
- 1861 A
Reptilien aus dem Stubensandstein des obern Keupers.
Paläontographica, vii, pp. 253-346; pls. xxviii-xxvii.
- 1861 B
Pterodactylus spectabilis aus dem lithographischen Schiefer von Eichstätt.
Paläontographica, x, pp. 1-10, pl. 1.
- 1863 A
Der Schädel des *Belodon* aus dem Stubensandstein des obern Keupers.
Paläontographica, x, pp. 227-246, pls. xxxviii-xlii.
- 1864 A
Die diluvialen Rhinoceros-Arten.
Paläontographica, xi, pp. 233-283, with pls. xxxv-xliii.
- 1865 A
Der Schädel von *Glyptodon*.
Paläontographica, xiv, pp. 1-18, with pls. i-vii.
- 1865 B
Reptilien aus dem Stubensandstein des obern Keupers.
Paläontographica, xiv, pp. 99-104, pls. xxiii-xxix.
- 1865 C
Zu *Chelydra decheni* aus der Braunkohle des Siebengebirges.
Paläontographica, xv, pp. 41-47, with pl. ix.

Meyer, H. v.—Continued. 1867 A
Die fossile Reste des Genus *Tupirus*.
Paläontographica, xv, pp. 159-200, with pls.
xxv-xxxii.

1867 B
Studien über das Genus *Mastodon*.
Paläontographica, xvii, pp. 1-72, with pls.
i-ix.

Meyer, Otto. 1885 A
Insectivoren und *Galeopithecus* geologisch alte Formen.
Neues Jahrb. Mineral., 1885, ii, pp. 229-230.

Miall, L. C. 1874 A
Report of the committee, consisting of Professor Phillips, LL. D., F. R. S., Professor Harkness, F. R. S., Henry Woodward, F. R. S., James Thompson, John Brigg, and L. C. Miall, on the Labyrinthodonts of the Coal-measures. Drawn up by L. C. Miall, secretary to the committee.

Report Brit. Assoc. Adv. Sci., Bradford meeting, 1873, pp. 225-249, with pls. i-iii.

1874 B
On the composition and structure of the bony palate of *Ctenodus*.
Quart. Jour. Geol. Soc., xxx, pp. 772-775, with pl. xlvii.

1875 A
Report of the committee, consisting of Professor Huxley, LL. D., F. R. S., Professor Harkness, F. R. S., Henry Woodward, F. R. S., James Thompson, John Brigg, and L. C. Miall, on the structure and classification of the Labyrinthodonts. Drawn up by L. C. Miall, secretary to the committee.

Report Brit. Assoc. Adv. Sci., Belfast meeting, 1874, pp. 149-192, with pls. iv-vii.

Abstract in Nature, 1874, vol. x, p. 449.

1875 B
On the structure of the skull of *Rhizodus*.

Quart. Jour. Geol. Soc., xxxi, pp. 624-627, with 1 text fig.

1875 C
Sur les Labyrinthodontes du terrain houiller. Deuxième partie.
Jour. de Zool. iv, pp. 19-37.

1878 A
Monograph of the Sirenoid and Crossopterygian Ganoids.
Paläontological Society, xxxii, pp. 1-32; pls. i, ia, ii-v.

Miall, L. C.—Continued. 1878 B
On the genus *Ceratodus*, with special reference to the fossil teeth found at Malédi, Central India.
Paläont. Indica (4), i, pp. 10-17, with pl. iv.

1878 C
The skull of the crocodile. A manual for students.

8 vo, pp. 1-50, London, 1878.

Pp. 42-50 contain a translation with annotations of Rathke's Untersuchungen über die Entwicklung und den Körperbau der Krokodile.

1880 A
On some bones of *Ctenodus*.
Proc. Yorkshire Zool. and Polytech. Soc. (2), vii, pp. 289-299, with 12 text figs.

1884 A
On a new specimen of *Megalichthys* from the Yorkshire coal field.
Quart. Jour. Geol. Soc., xl, pp. 347-352, with 6 figs. in the text.

Middendorff, A. Th. 1850 A
Untersuchungen an Schädeln des gemeinen Landbären als kritische Beleuchtung der Streitfrage über die Arten fossiler Hohlenbären.

Verhandl. russ.-kais. mineralog. Gesellsch., St. Petersburg, Jahrg., 1850-51, pp. 7-99, with text figures.

Middleton, W. G., and Moore, Joseph. 1900 A

Skull of fossil bison.

Proc. Indiana Acad. Sci. for 1899, pp. 178-181, with plate.

Miller, Gerritt S. 1894 A
On a collection of small mammals from the New Hampshire mountains.
Proc. Boston Soc. Nat. Hist., xxvi, pp. 177-197, with pls. iii, iv.

1896 A
Genera and subgenera of voles and lemmings.

N. A. Fauna, No. 12 (U. S. Dept. Agriculture), pp. 1-85, with pls. i-iii and 40 figs. in the text.

1897 A
Revision of the North American bats of the family *Vespertilionidæ*.
N. A. Fauna, No. 13 (U. S. Dept. Agriculture), pp. 1-135, with 40 figs. in the text.
This work discusses critically the nomenclature and synonymy of the family *Vespertilionidæ* and its genera and species.

1899 A
A new fossil bear from Ohio.
Proc. Biolog. Soc. Washington, xiii, pp. 53-56.
Describes *Ursus procerus*.

Miller, Gerritt S.—Continued. 1899 B
Preliminary list of New York mammals.

Bull. N. Y. State Mus., vi, No. 29, pp. 271-390.

On pages 372-376 is given a list of the fossil species known from the State.

Miller, Hugh. 1859 A

The Old Red sandstone; or new walks in an old field; to which is appended a series of geological papers read before the Royal Physical Society of Edinburgh.

Pages 427, pls. 14. Boston: Gould and Lincoln, 1859.

Original edition published at Edinburgh, 1841.

1873 A

Footprints of the Creator, or the *Asterolepis* of Stromness, with a memoir by Louis Agassiz.

Fifteenth edition. Edinburgh, 1873. William P. Nimmo.

Miller, John. 1872 A

On the so-called hyoid plate of the *Asterolepis* of the Old Red sandstone.

Report Brit. Assoc. Adv. Sci., 41st meeting, Edinburgh, 1871, pp. 106-107.

Miller, S. A. 1877 A

The American Palæozoic fossils: a catalogue of the genera and species, with names of authors, dates, places of publication, groups of rocks in which found, and the etymology and signification of the words, and an introduction devoted to the stratigraphical geology of the Palæozoic rocks.

Cincinnati, Ohio, 1877, pages i-xv; 1-246.

Pages 227-242 are devoted to lists of the genera and species of Palæozoic vertebrates. In 1883 the author published a supplement consisting of pages 247 to 334, in which were additions and corrections to the contents of the original work. The latter and the supplement bound together constitute the second edition, with the original title. As the same author's work of 1889 is fully quoted in this Bibliography and Catalogue, the present one is not quoted.

1889 A

North American geology and palæontology, for the use of amateurs, students, and scientists.

Pp. 1-664, with 1,177 figs. in the text. Cincinnati, Ohio, 1889.

Pp. 586-614 contain a list of the genera and species of Palæozoic fishes, with references to places of publication. The genera are defined. Pp. 614-627 are similarly devoted to the *Batrachia*.

Miller, S. A.—Continued. 1892 A

First appendix, 1892. [To North American geology and palæontology.] Pp. 665-718.

The names of vertebrates are found on pp. 713-718. A number of new generic names are proposed to replace preoccupied names.

1897 A

Second appendix to North American geology and palæontology.

Pp. 719-793.

Miller, Sylvanus. 1837 A

Retrospective notice of the discovery of fossil mastodon bones in Orange county (N. Y.).

Amer. Jour. Sci., xxxi, pp. 171-172.

Extract from a letter addressed by Sylvanus Miller, esq., to Hon. Dewitt Clinton, in 1815.

Minot, C. S. 1882 A

Is man the highest animal?

Proc. Amer. Assoc. Adv. Sci., 30th meeting, Cincinnati, 1881, pp. 240-242.

Mitchell, Hugh. 1862 A

On the restoration of *Pteraspis*.

The Geologist, v, pp. 404-406, with 3 figs. in the text.

1864 A

Restoration of *Pteraspis*.

The Geologist, vii, pp. 117-118, fig. 1.

Mitchell, James A. 1895 A

The discovery of fossil tracks in the Newark system (Jura-Trias) of Frederick county, Md.

Johns Hopkins University circulars, xv, no. 121, pp. 15-16.

No species are named.

Mitchill, Samuel L. 1818 A

Observations on the geology of North America; illustrated by the description of various organic remains found in that part of the world.

Cuvier's Essay on the theory of the earth, pp. 319-431, with pls. vi-viii. American edition published by Kirk & Mercein, New York.

1824 A

Observations on the teeth of the *Megatherium* recently discovered in the United States.

Annals Lyc. Nat. Hist. N. Y., i, pp. 58-61, pl. vi.

Mitchill, Smith, J. A., and Cooper.

1828 A

Discovery of a fossil walrus in Virginia. Report of Messrs. Mitchill, J. A. Smith, and Cooper on a fossil skull

Mitchell, Smith, J. A., and Cooper—
Continued.

sent to Dr. Mitchell by Mr. Cooper, of Accomac County, Va.

Annals Lyc. Nat. Hist. N. Y., ii, pp. 271-272.
Notice of in Edinb. New Philos. Jour.,
1828, v., p. 325.

Mitivier, M. M. 1892 A
New footprints from the Connecticut Valley.

Proc. Amer. Assoc. Adv. Sci., 40th meeting, Washington, 1891, p. 286. An abstract in 5 lines.

Mivart, St. George. 1864 A
Notes on the crania and dentition of the *Lemuridæ*.

Proc. Zool. Soc. Lond., 1864, pp. 611-648, with 8 figs. in the text.

1865 A

Contributions toward a more perfect knowledge of the axial skeleton in the *Primates*.

Proc. Zool. Soc. Lond., 1865, pp. 545-592, with 13 figs. in the text.

1867 A

Additional notes on the osteology of the *Lemuridæ*.

Proc. Zool. Soc. Lond., 1867, pp. 960-975, with 7 figs. in the text.

1867 B

Notes sur l'ostéologie des Insectivores.

Ann. Sci. Naturelles. (5), Zool. viii, pp. 221-284, with figs. in the text.

1867 C

Notes on the osteology of the *Insectivora*.

Jour. Anat. and Physiol. i, pp. 281-312, with several text figs.; ii, pp. 117-154.

1868 A

Notes sur l'ostéologie des Insectivores.

Ann. Sci. Naturelles, (5), Zool. ix, pp. 311-372, with figs. in the text.

A continuation of Mivart, St. G., 1867 B.

1868 B

On the appendicular skeleton of the *Primates*.

Philos. Trans. Roy. Soc. Lond., clvii, pp. 299-429, pls. xi-xiv.

1870 A

On the axial skeleton of the *Urodela*.

Proc. Zool. Soc. Lond., 1870, pp. 260-278, with 19 figs. in the text.

1871 A

On *Hemicentetes*, a new genus of *Insectivora*, with some additional remarks on the osteology of that order.

Proc. Zool. Soc. Lond., 1871, pp. 58-79, with pl. v and 9 text figs.

Mivart, St. George—Continued. 1873 A
On *Lepilemur* and *Cheirogaleus*, and on the zoological rank of the *Lemuroidea*.

Proc. Zool. Soc. Lond., 1873, pp. 484-510, with pl. xliii and 18 woodcuts in the text.

1874 A

On the axial skeleton of the ostrich (*Struthio camelus*).

Trans. Zool. Soc. Lond., viii, pp. 385-451, with 79 figs. in the text.

1875 A

Ape.

Encyclop. Brit., ed. 9, ii, pp. 148-169, with 19 figs. in the text.

This article is followed by a bibliography of the subject.

1877 A

On the axial skeleton of the *Struthionidæ*.

Trans. Zool. Soc. Lond., x, pp. 1-52, with 43 figs. in the text.

1878 A

On the axial skeleton of the *Pelecanidæ*.

Trans. Zool. Soc. Lond., x, pp. 315-378, with pls. lv-lxi.

1879 A

Notes on the fins of Elasmobranchs, with considerations on the nature and homologies of vertebrate limbs.

Trans. Zool. Soc. Lond., x, pp. 439-484, with pls. lxxiv-lxxix.

1881 A

The cat; an introduction to the study of the backboned animals, especially mammals.

Pp. i-xxiii; 1-557, with 1 pl. and 208 figs. in the text. 8 vo.

1882 A

On the classification and distribution of the *Æluroidæ*.

Proc. Zool. Soc. Lond., 1882, pp. 135-208, with 15 figs. in the text.

1885 A

Notes on the *Pinnipedia*.

Proc. Zool. Soc. Lond., 1885, pp. 484-501.
Abstract in Archiv f. Anthropol., xvii, pp. 176-177.

1885 B

On the anatomy, classification, and distribution of the *Arctoidea*.

Proc. Zool. Soc. London, 1885, pp. 340-404.
Pp. 397-404 contain valuable tables, which give measurements of various portions of the skeletons, including teeth, of all the genera belonging to the *Arctoidea*.

- Mivart, St. George**—Continued. 1886 A
Reptiles.
Encyclop. Brit., ed. 9, xx, pp. 445-465, with
figs. 3-29.
This portion of the article on *Reptilia* treats
of the anatomy of the members of the class,
especially of the osteology. Appended is a list
of general works on the anatomy.
- 1892 A
Birds: The elements of ornithology.
Pp. 1-329, with 174 illus., London.
- Möbius, K.** 1892 A
Die Behaarung des Mammuths und
der lebenden Elephanten, vergleichend
untersucht.
Sitzungsber. k. p. Akad. Wissensch. Berlin,
math. naturw. Cl., 1892, pp. 527-538, with pl. iv.
- Mojsisovics, A.** 1889 A
Ueber einen seltenen Fall von Poly-
dactylismus beim Pferde.
Anatom. Anzeiger, iv, pp. 255-256.
- Molin, Raffaele.** 1859 A
Sulla reliquie d' un *Pachyodon* disso-
ttrate a Libano due ore nord-est di
Belluno in mezzo all' arenaria grigia.
Sitzungsber. Akad. Wissensch. Berlin, math.-
nat. Cl., xv, pp. 117-128, with pls. i, ii.
- Mollier, S.** 1892 A
Zur Entwicklung der Selachier-
extremitäten.
Anatom. Anzeiger, vii, 1892, pp. 351-365.
Treats of the embryological development of
the limbs of *Selachii*.
- 1893 A
Die paarigen Extremitäten der Wir-
belthiere. I. Das Ichthyopterygium.
Merkel and Bonnet's Anatom. Hefte, Ergeb-
nisse, iii, pp. 1-160, with pls. 1-viii and several
text figs.
- 1895 A
Die paarigen Extremitäten der Wir-
belthiere. II. Das Cheiropterygium.
Merkel and Bonnet's Anatom. Hefte, Ergeb-
nisse, v, pp. 435-529, with 8 pls.
- Monks, Sarah P.** 1878 A
The columella and stapes in some
North American turtles.
Proc. Amer. Philos. Soc., xvii, pp. 335-337,
pls. xvi, xvii.
- Moore, Charles.** 1857 A
On the skin and food of *Ichthyosauri*
and *Teleosauri*.
Report Brit. Assoc. Adv. Sci., 26th meeting,
Cheltenham, 1856, pp. 69-70.
- Moore, Joseph.** 1890 A
A recent find of *Castoroides*.
Amer. Naturalist, xxiv, pp. 767-768.
Found at Richmond, Ind.
- Moore, Joseph**—Continued. 1890 B
Concerning a skeleton of the great
fossil beaver, *Castoroides ohioensis*.
Jour. Cincinnati Soc. Nat. Hist., xiii, pp. 138-
169, with 25 figs. in the text.
- 1891 A
Concerning some portions of *Casto-
roides ohioensis* not heretofore known.
Proc. Amer. Assoc. Adv. Sci., 39th meeting,
Indianapolis, 1890, pp. 265-267.
Abstract of paper presented.
- 1893 A
The recently found *Castoroides* in Ran-
dolph County, Ind.
Amer. Geologist, xii, pp. 67-74, with pl. iii.
- 1897 A
The Randolph mastodon.
Proc. Indiana Acad. Sci. for 1896, pp. 277-278,
with pl.
Records finding of remains of a large masto-
don in Randolph County, Ind., and of another
near New Paris, Ohio.
- 1900 A
A cranium of *Castoroides* found at
Greenfield, Ind.
Proc. Indiana Acad. Sci. for 1899, p. 171, with
pls. i, ii.
- Moore, W. D.** 1873 A
On footprints in the Carboniferous
rocks of western Pennsylvania.
Amer. Jour. Sci. (3), v, pp. 292-293.
? *Cheirotherium reiteri* described.
- Moreno, Francisco P.** 1892 A
Lijeros apuntes sobre dos géneros de
cetáceos fósiles de la República Argen-
tina.
Revista Museo La Plata, iii, pp. 393-400, with
pls. x, xi.
- Morse, E. S.** 1871 A
On the carpal and tarsal bones of
birds.
Amer. Naturalist, v, pp. 524-525.
- 1872 A
On the tarsus and carpus of birds.
Annals Lyc. Nat. Hist. N. Y., x, pp. 141-158,
with pls. iv, v.
- 1880 A
On the identity of the ascending
process of the astragalus in birds with
the intermedium.
Anniv. Mem. Boston Soc. Nat. Hist., 1880,
pp. 3-10, pl. i, and 12 figs. in the text.
- 1884 A
Man in the Tertiaries.
Amer. Naturalist, xviii, pp. 1001-1012.
Vice-presidential address before section of
anthropology A. A. A. S., 1884.
- Morton, S. G.** 1830 A
Synopsis of the organic remains of

1890A'

[Faint handwritten notes at the bottom of the page]

Morton, S. G.—Continued.

the ferruginous sand formation; with geological remarks.

Amer. Jour. Sci., xvii, pp. 274-295; xviii, pp. 243-250.

Contains brief and unimportant remarks on the few fossil vertebrates known at that time from the Cretaceous rocks.

1834 A

Synopsis of the organic remains of the Cretaceous group of the United States, illustrated by 19 plates, to which is added an appendix containing a tabular view of the Tertiary fossils hitherto discovered in North America.

Pp. i-vi, 1-88; Appendix, 1-8; and "Additional observations," pp. 4.

Pls. xi, xii contain figures of teeth of sharks. The names of these, given provisionally by L. Agassiz, are found in the "Additional observations."

1835 A

Notice of the fossil teeth of fishes of the United States, the discovery of the Galt in Alabama, and a proposed division of the American Cretaceous group.

Amer. Jour. Sci., xxviii, pp. 276-278.

1842 A

Description of some new species of organic remains of the Cretaceous group of the United States; with a tabular view of the fossils hitherto discovered in this formation.

Jour. Acad. Nat. Sci. Phila., viii, pp. 207-227, pls. x, xi.

Contains description and figure of *Ptychodus mortoni*.

1844 A

Description of the head of a fossil crocodile from the Cretaceous strata of New Jersey.

Proc. Acad. Nat. Sci. Phila., ii, pp. 82-85, with 1 fig. in the text.

Description of *Crocodylus (Gavialis?) clavirostris*.

1844 B

Fossil bones of *Mosasaurus*.

Proc. Acad. Nat. Sci. Phila., ii, pp. 132-133.

Announces exhibition of bone of *M. occidentalis*, but no description is given.

1845 A

Description of the head of a fossil crocodile from the Cretaceous strata of New Jersey.

Amer. Jour. Sci., xlviii, pp. 265-267, with 1 fig.

Moseley, H. N., and Lankester, E. R.

1868 A

On the nomenclature of the mammalian teeth and on the dentition of

Moseley, H. N., and Lankester, E. R.—Continued.

of the mole (*Talpa europæa*) and the badger (*Meles taxus*).

Jour. Anat. and Physiol., iii, pp. 72-80, with pl. ii, figs. 5, 6.

Mudge, B. F.

1866 A

Discovery of fossil footmarks in the Liassic (?) formation of Kansas.

Amer. Jour. Sci. (2), xli, pp. 174-176.

Species not identified. Prof. C. H. Hitchcock regards them as artifacts (Hitchcock, C. H., 1869 A., p. 132).

1874 A

Recent discoveries of fossil footprints in Kansas.

Trans. Kansas Acad. Sci., ii, pp. 7-9 (reprint of 1896, pp. 71-74).

Not assigned to genera and species.

1875 A

Rare forms of fish in Kansas.

Trans. Kansas Acad. Sci., iii, p. 22 (reprint of 1896, pp. 121-122).

Refers to genus *Agassizodus* and to an undetermined snout fish.

Müller, Aug.

1853 A

Beobachtungen zur vergleichenden Anatomie der Wirbelsäule.

Archiv f. Anat. Physiol. u. wissenschaft. Med. Jahrg. 1853, pp. 260-316.

Discusses the homologies of the ribs and flesh bones of fishes, the ribs and hæmal arches of the higher vertebrates, the ear bones of the *Cyprinidae*, etc.

Müller, Johannes.

1831 A

Beiträge zur Anatomie und Naturgeschichte der Amphibien.

Tiedemann and Treviranus's Zeitschr. f. Physiologie, iv, pp. 190-275, with pls. xviii-xxii.

Under *Amphibien* Müller here considers both the groups *Batrachia* and *Reptilia*.

1835 A

Vergleichende Anatomie der Myxinoïden, der Cyclostomen mit durchbohrtem Gaumen. Erster Theil, Osteologie und Myologie.

Pp. 1-276, pls. i-ix. Berlin, 1835.

This portion of the anatomy of the Myxinoïds appeared in the Abhandl. Akad. Wissensch. Berlin, for 1831 (1836), pp. 56-340.

Extensive comparisons are made in this work with the structures of the other fishes. A "Nachtrag" is added in the part of the work on neurology published in 1838.

1843 A

Beiträge zur Kenntniss der natürlichen Familien der Knochenfische.

Berichte k. p. Akad. Wissensch. Berlin, 1843, pp. 211-218.

- Müller, Johannes**—Continued. 1846 A
Fernere Bemerkungen über den Bau der Ganoiden.
Archiv Naturgesch., xii, pp. 190-208.
- 1846 B
Ueber den Bau der Ganoiden.
Berichte k. p. Akad. Wissensch. Berlin, 1846, pp. 67-85.
- 1846 C
Ueber den Bau und die Grenzen der Ganoiden und über das natürliche System der Fische.
Abhandl. k. p. Akad. Wissensch. Berlin, 1844, pp. 117-216, with pls. i-vi.
- 1847 A
Basilosaurus.
Amer. Jour. Sci. (2), iv, pp. 421-422.
Extract from a letter sent by J. Müller to A. Retzius.
See also reference to a letter from Professor Müller to Dr. Dunglison in Proc. Amer. Philos. Soc., iv, p. 338. Date of letter Apr. 20, 1847.
- 1847 B
Ueber die von Herrn Koch in Alabama gesammelten fossilen Knochenreste seines *Hydrarchus*.
Archiv Anat. Physiol., u. Wissensch. Med. xiv, pp. 363-377; 378-396.
- 1847 C
Untersuchungen über den Hydrarchos.
Berichte k. p. Akad. Wissensch. Berlin, 1847, pp. 103-114.
Reprinted in Neues Jahrbuch Min., 1847, pp. 623-631.
- 1847 D
Ueber den Bau des Schädels des *Zeuglodon cetoides* Ow.
Berichte k. p. Akad. Wissensch. Berlin, 1847, p. 160.
A brief note.
- 1847 E
Ueber die Wirbelsäule des *Zeuglodon cetoides*.
Berichte k. p. Akad. Wissensch. Berlin, 1847, pp. 185-200.
- 1849 A
Ueber die fossilen Reste der Zeuglodonten von Nordamerika, mit Rücksicht auf die europäischen Reste aus dieser Familie.
Pp. i-iv; 1-38. Folio, with 27 lith. pls. Berlin, 1849.
- 1851 A
Neue Beiträge zur Kenntniss der Zeuglodonten.
Monatsber. k. Akad. Wissensch., Berlin, 1851, pp. 236-246.
- Müller, J., and Henle, J.** 1837 A
Ueber die Gattungen der Haifische und Rochen.
Berichte k. p. Akad. Wissensch. Berlin, i, pp. 111-118.
- 1837 B
Ueber die Gattungen der Plagiostomen.
Arch. Naturgesch. 1837, i, pp. 394-401; 434.
- 1838 A
On the generic characters of cartilaginous fishes.
Mag. Nat. Hist. (2), ii, pp. 33-37; 88-92.
- 1841 A
Systematische Beschreibung der Plagiostomen.
Pp. i-xxii; 1-204, with 60 lith. pls. Berlin, 1841.
- Murie, James.** 1865 A
On the anatomy of a finwhale (*Physalus antiquorum* Gray) captured near Gravesend.
Proc. Zool. Soc. Lond., 1865, pp. 206-227, with 4 woodcuts in text.
- 1870 A
Notes on the anatomy of the prongbuck, *Antilocapra americana*.
Proc. Zool. Soc. Lond., 1870, pp. 334-368, with 9 woodcuts in the text.
- 1871 A
Researches upon the anatomy of the *Pinnepedia*. Part I. On the walrus (*Trichechus rosmarus* Linn.).
Trans. Zool. Soc. Lond., vii, pp. 411-464, with pls. li-iv.
- 1872 A
On the form and structure of the manatee (*Manatus americanus*).
Trans. Zool. Soc. Lond., viii, pp. 127-202, with pls. xvii-xxvi.
- 1872 B
On the skin, etc., of the *Rhytina*, suggested by a recent paper of Dr. A. Brandt's.
Ann. and Mag. Nat. Hist. (4), ix, pp. 306-313, with pl. xix.
- 1874 A
Researches upon the anatomy of the *Pinnepedia*. Part III. Descriptive anatomy of the sea lion (*Otaria jubata*).
Trans. Zool. Soc. Lond., viii, pp. 501-582, with pls. lxxv-lxxxii.
- Nasmyth, Alexander.** 1842 A
On the minute structure of the tusks of extinct mastodontoid animals.
Proc. Geol. Soc. Lond., iii, pp. 775-780.

- Natural Science.** 1893 A
The restoration of extinct animals.
Natural Science, ii, pp. 135-143, with 2 figs.
An anonymous paper. Refers to *Triceratops*,
Ceratosaurus, *Hesperornis*, *Glyptodon*, etc.
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- 1894 A
Armored whales.
Natural Science, iv, pp. 174-176.
An unsigned note.
- Nature.** 1871 A
American notes.
Nature, iii, p. 514.
A note on *Elephas primigenius* in Alaska.
-
- 1873 A
Notes.
Nature, vii, p. 310.
A note on *Dinoceras mirabilis* and the toothed birds.
-
- 1873 B
On *Dinoceras mirabilis* (Marsh).
Nature, vii, p. 366, with 1 woodcut.
-
- 1873 C
[Note on Professor Cope's *Loxolophodon cornutus*, etc.]
Nature, vii, p. 471.
-
- 1874 A
The "*Brontotheridæ*," a new family of fossil mammals.
Nature, ix, p. 227, figs. 1 and 2.
Editorial remarks on Marsh, O. C., 1874 A.
-
- 1874 B
A complete specimen of a *Palæotherium*.
Nature, ix, pp. 285-286, with 1 fig.
P. magnum discovered near Paris.
- Naumann, Edmund.** 1882 A
Ueber japanische Elephanten der Vorzeit.
Palæontographica, xxviii, pp. 1-40, with pls. i-vii.
- Negri, Arturo.** 1892 A
Trionici eocenici ed oligocenici del Veneto.
Mem. mat. e fisica Soc. Ital. Sci. (3), viii, art. 7, pp. 1-53, with pls. i-v.
On pp. 1-8 are presented the literature bearing on fossil *Trionychidæ* and a list of known species living and extinct.
- Nehring, Alfred.** 1875 A
Fossile Lemminge und Arvicolen aus dem Diluviallehm von Thiede bei Wolfenbüttel.
Zeitschr. gesamt. Naturwiss., xlv, (n. F., xi), 1875, pp. 1-28, with pl. i.
Discusses the structure of *Arvicola* and *Myodes*, especially that of the teeth.
- Nehring, Alfred—Continued.** 1886 A
Beiträge zur Kenntniss der *Galictis*-Arten.
Zool. Jahrbücher, Abth. Systemat. Geograph., etc., i, pp. 177-212, with 3 figs. in the text.
-
- 1893 A
Ueber pleistocäne Hamster-Reste aus Mittel- und Westeuropa.
Jahrbuch k. k. geol. Reichsanstalt, Wien, xliii, pp. 179-198.
- Newberry, J. S.** 1853 A
Fossil fishes of the cliff limestone of Ohio.
Annals of Science (Cleveland, Ohio), i, pp. 12-13, text figs. 1, 2.
-
- 1853 B
On the fossil fishes of the cliff limestone of Ohio.
Annals of Science (Cleveland, Ohio), i, pp. 282-283.
Abstract of paper presented at Cleveland meeting of Amer. Assoc. Adv. Sci., 1853.
The remarks are of a general nature and no species are named. See Newberry, J. S., 1856 A.
-
- 1856 A
On the fossil fishes of the cliff limestone of Ohio.
Proc. Amer. Assoc. Adv. Sci., 7th meeting, Cleveland, 1853, pp. 166-167.
Same as Newberry, J. S., 1853 B.
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- 1856 B
Description of several new genera and species of fossil fishes from the Carboniferous strata of Ohio.
Proc. Acad. Nat. Sci. Phila., viii, pp. 96-100.
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- 1857 A
New fossil fishes from the Devonian rocks of Ohio.
Amer. Jour. Sci. (2), xxiv, pp. 147-149.
Extracted from Bulletin of National Institute.
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- 1857 B
[Letter read changing the genus *Mekolepis* to *Eurylepis*, the former being preoccupied.]
Proc. Acad. Nat. Sci. Phila., 1857, p. 150.
-
- 1857 C
Fossil fishes from the Devonian of Ohio.
Proc. National Institute, Washington, D. C. (n. s.), i, pp. 119-126, with 1 fig. in the text.
There appears to have been a reprint of this paper with its own pagination.
-
- 1862 A
Notes on American fossil fishes.
Amer. Jour. Sci. (2), xxxiv, pp. 73-78, with figs. in the text.

Newberry, J. S.—Continued. 1868 A

On some fossil reptiles and fishes from the Carboniferous strata of Ohio, Kentucky, and Illinois.

Proc. Amer. Assoc. Adv. Sci., 16th meeting, Burlington, Vt., 1867, pp. 144-146. Abstract.

1868 B

On some remarkable fossil fishes discovered by Rev. H. Herzer, in the Black shale (Devonian) at Delaware, Ohio.

Proc. Amer. Assoc. Adv. Sci., 15th meeting, Buffalo, 1867, pp. 146-147, with two woodcuts. Describes *Dinichthys herzeri*.

1870 A

The geological position of the remains of elephant and mastodon in North America.

Proc. Lyc. Nat. Hist. N. Y., i, pp. 77-84.

1870 B

Fossil fishes from the Devonian rocks of Ohio.

Proc. Lyc. Nat. Hist. N. Y., i, pp. 152-153.

1870 C

Remarks on the fossil skull of a walrus found at Long Branch.

Proc. Lyc. Nat. Hist. N. Y., i, p. 75.

Recorded as belonging to *Trichechus rosma-rus*.

1871 A

Fossils from the phosphatic beds of South Carolina.

Proc. Lyc. Nat. Hist. N. Y., i, pp. 240-241.

Brief mention of a few species of vertebrates.

1873 A

The classification and geological distribution of our fossil fishes.

Report. Geol. Surv. Ohio, ii, Part II, Palæontology, pp. 245-355, with pls. xxiv-xl.

1873 B

Notes on the genus *Conchiopsis* Cope.

Proc. Acad. Nat. Sci. Phila., 1873, pp. 425-426.

1873 C

Remarks reviewing the history of the class of fishes as traced on the older rocks of North America.

Proc. Lyc. Nat. Hist. N. Y., 2d ser., No. 2, March to June, pp. 25-28.

1873 D

Specimens of *Celacanthus elegans* Newb. from the Coal-measures of Linton, Ohio.

Proc. Lyc. Nat. Hist. N. Y., 2d ser., No. 2, March to June, pp. 30-32.

Some general remarks on *Celacanthus*; no description of *C. elegans*.

Newberry, J. S.—Continued. 1874 A

[Remarks on *Castoroides ohioensis*].

Proc. Lyc. Nat. Hist. N. Y., 2d ser., No. 4, Jan. to June, pp. 92-93.

1874 B

Description of the Linton coal bed.

Proc. Lyc. Nat. Hist. N. Y., 2d ser., No. 4, Jan. to June, pp. 134-135.

Contains mention of four genera of fishes found there.

1874 C

Account of a second species of *Dinichthys* recently discovered in Ohio.

Proc. Lyc. Nat. Hist. N. Y., 2d ser., No. 4, Jan. to June, pp. 149-151.

Gives a description (not the earliest) of *Dinichthys terrelli*.

1874 D

Skull of a walrus (*Trichechus rosma-rus*).

Proc. Lyc. Nat. Hist. N. Y., 2d ser., No. 3, Oct. to Dec., 1873, p. 71.

Identification of a skull found in Accomac County, Va., a drawing of which was presented by Dr. R. P. Stevens.

1874 E

Remarks on *Celacanthus elegans* and on Prof. Cope's genera *Conchiopsis* and *Peplorhina*.

Proc. Lyc. Nat. Hist. N. Y., 2d ser., No. 3, Oct. to Dec., 1873, pp. 76-77.

1874 F

[Remarks on skulls of *Dicotyles compressus* found at Columbus, Ohio.]

Proc. Lyc. Nat. Hist. N. Y., 2d ser., No. 3, Oct. to Dec., 1873, pp. 77-78.

1875 A

Descriptions of fossil fishes.

Report Geol. Surv. Ohio, ii, Part II, Palæontology, pp. 1-64, with pls. liv-lix.

Contains descriptions and figures of the fossil fishes of the Devonian and the Carboniferous formations of Ohio.

1876 A

Descriptions of the Carboniferous and Triassic fossils collected on the San Juan Exploring Expedition under Capt. J. N. Macomb, U. S. Engineers.

Report of the Exploring Expedition from Santa Fe, N. Mex., to the junction of the Grand and Green rivers of the Great Colorado of the West, in 1859, under the command of Capt. J. N. Macomb, Washington, 1876, pp. 135-148, with pl. iii, figs. 1, 1a; 2-2f.

Describes *Deltodus mercurii* Newb., *Ptychodus whipplei* Marcou, and mentions finding of *Lamna texana* Roem., and *Oxyrhina mantelli* Ag.

Newberry, J. S.—Continued. 1877 A*Rhynchodus excavatus.*

Geology of Wisconsin, survey of 1873–1877, ii, p. 397.

1878 A

Descriptions of new palæozoic fishes.

Ann. N. Y. Acad. Sci., i, pp. 188–192.

Said to have been issued in 1879. Describes *Diplognathus mirabilis*, *Glyptopomus sayrei*, *Archæobatis gigas*, gen. nov., *Dinichthys minor*, *Ctenacanthus compressus*, *Rhynchodus occidentalis*, and *R. excavatus*.**1878 B**

Description of new fossil fishes from the Trias of New Jersey and Connecticut.

Ann. N. Y. Acad. Sci., i, pp. 127–128.

Describes *Diplurus longicaudatus* gen. et sp. nov. and *Ptycholepis marshi* sp. nov.**1879 A**

[Letter to Prof. John Collett, describing a collection of remains of fossil fishes collected in Indiana.]

Report State geologist of Indiana for the years 1876, 1877, 1878. Indianapolis, Ind., 1879, pp. 341–349.

1883 A

Some interesting remains of fossil fishes recently discovered.

Trans. N. Y. Acad. Sci., ii, pp. 144–147.

Describes new genus *Mylostoma* and the new species *M. variabilis* and *M. terrelli*.**1883 B**The relations of *Dinichthys*, as shown by complete crania recently discovered by Mr. Jay Terrell in the Huron shale of Ohio.

Trans. N. Y. Acad. Sci., iii, p. 20.

A brief abstract.

1884 A

On the recent discovery of new and remarkable fossil fishes in the Carboniferous and Devonian rocks of Ohio and Indiana.

Geol. Magazine (3), i, pp. 523–524.

1884 B*Ctenacanthus wrighti* n. sp.

Thirty-fifth Ann. Rept. N. Y. State Mus. Nat. Hist., p. 206, pl. 16, fig. 12.

1885 A

On the recent discovery of new and remarkable fossil fishes in the Carboniferous and Devonian rocks of Ohio and Indiana.

Report Brit. Assoc. Adv. Sci., 54th meeting, Montreal, 1884, pp. 724–725.

Same as Newberry, J. S., 1884 A.

Newberry, J. S.—Continued. 1885 B

Description of some gigantic Placoderm fishes recently discovered in the Devonian of Ohio.

Trans. N. Y. Acad. Sci., v, pp. 25–28.

1885 C

Descriptions of some peculiar screw-like fossils from the Chemung rocks.

Ann. N. Y. Acad. Sci., xviii, pp. 217–220, with pl. xviii.

Describes new genus *Spiraxis*, with species *major* and *randalli*.**1885 D**

Sur les restes de grands poissons fossils récemment découverts dans les roches devoniennes de l'Amérique du Nord.

Compte rend. Cong. Géol. Internat. Berlin, 1885, pp. 273–276.

Cited from a reprint with pp. 11–14.

1887 A

The fauna and flora of the Trias of New Jersey and the Connecticut Valley.

Trans. N. Y. Acad. Sci., vi, pp. 124–128.

Contains a list of the fishes found in the Triassic rocks.

1887 B*Celosteus*, a new genus of fishes from the Lower Carboniferous limestones of Illinois.

Trans. N. Y. Acad. Sci., vi, pp. 137–138.

Describes *Celosteus ferox* gen. et sp. nov.**1887 C**Description of a new species of *Titanichthys*.

Trans. N. Y. Acad. Sci., vi, pp. 164–165.

An abstract describing *Titanichthys clarkii*.**1888 A**

Fossil fishes and fossil plants of the Triassic rocks of New Jersey and the Connecticut valley.

Mon. U. S. Geol. Surv., xiv, pp. i–xiv, 1–152, with pls. i–xxvi.

For review of by A. S. Woodward, see Nature, xliii, pp. 366–367.

1888 BOn the structure and relations of *Edestus*, with a description of a gigantic new species.

Ann. N. Y. Acad. Sci., iv, pp. 113–122, with pls. iv–vi.

Describes *Edestus giganteus* sp. nov.**1888 C**Note on a new species of *Rhizodus*, from the St. Louis limestone at Alton, Ill.

Trans. N. Y. Acad. Sci., vii, p. 165.

Describes *Rhizodus anceps* sp. nov.

Newberry, J. S.—Continued. 1888 D
On the fossil fishes of the Erie shale of Ohio.

Trans. N. Y. Acad. Sci., vii, pp. 178-180.

An abstract presenting descriptions of *Cladodus kepleri*, *Actinophorus clarkii*, *Dinichthys curtus*, *D. tuberculatus*.

1889 A

The Paleozoic fishes of North America.

Mon. U. S. Geol. Surv., J. W. Powell, Director, xvi, pp. 1-340, pls. i-lxiii.

Although the imprint of the title-page of this monograph gives 1889 as year of printing, it was not issued until August, 1890.

A review of this monograph by A. S. Woodward appeared in *Nature*, xliii, p. 146, 1890.

1890 A

On the genus *Oracanthus* Ag.

Trans. N. Y. Acad. Sci., ix, pp. 131-133.

Abstract.

1892 A

American Devonian fishes found in Belgium.

Amer. Naturalist, xxvi, p. 1025.

From Ann. Soc. Géol. Belgique, xvi.

Dinichthys pustulosus (= *D. tuberculatus*) and *D. terrelli* are reported from Belgium. The determinations were made by Dr. Newberry. The paper above quoted is a translation of a paper by Lohest.

1897 A

New species and a new genus of American Palæozoic fishes, together with notes on the genera *Oracanthus*, *Dactylodus*, *Polyrhizodus*, *Sandalodus*, *Deltodus*.

Trans. N. Y. Acad. Sci., xvi, pp. 282-304, with pls. xxii-xxvi. Edited by Bashford Dean.

In this paper there are described 16 new species, most of them figured. The new genus *Stenognathus* is proposed; having as type *Dinichthys corrugatus*.

Newberry, J. S., and Worthen, A. H.

1866 A

Descriptions of new species of vertebrates, mainly from the Subcarboniferous limestone and Coal Measures of Illinois.

Geol. Surv. Illinois, A. H. Worthen, Director, ii, 1866, pp. 9-134, pls. i-xlii.

1870 A

Descriptions of, fossil vertebrates.

Geol. Surv. Illinois, A. H. Worthen, Director, iv, 1870, pp. 347-374, with pls. i-iv.

Contains descriptions and figures of fossil fishes from the Carboniferous and Subcarboniferous formations of Illinois.

Newton, Alfred. 1861 A

Abstract of Mr. J. Wolley's researches in Iceland respecting the gare-fowl, or great auk (*Alca impennis*, Linn.).

The Ibis (1), iii, pp. 374-399.

1868 A

Remarks on Professor Huxley's classification of birds.

The Ibis (2), iv, pp. 85-96.

1870 A

On existing remains of the gare-fowl (*Alca impennis*).

The Ibis (2), vi, pp. 257-261.

1875 A

Birds.

Encyclop. Brit., ed. 9, iii, pp. 728-778, with figs. 38-49.

This portion of the article on birds is devoted mainly to avian biology. Pages 728-736 deal briefly with fossil birds, subfossil birds, birds recently exterminated, and birds partially exterminated.

1879 A

Gare-fowl.

Encyclop. Brit., ed. 9, x, pp. 78-80, with 1 fig.

The author cites the principal literature bearing on the history and structure of this bird.

1896 A

A dictionary of birds. By Alfred Newton, assisted by Hans Gadow; with contributions from Richard Lydekker, B. A., F. R. S., Charles S. Roy, M. A., F. R. S., and Robert Shufeldt, M. D., late United States Army.

London, Adam and Charles Black, 1893-1896, pp. i-xii; 1-1088, with numerous text figs.

In the introduction (pp. 1-124) Newton discusses the history of the science of ornithology and schemes of classification. Gadow has articles on the skeleton.

Newton, E. T. 1877 A

On the remains of *Hypsodon*, *Portheus*, and *Ichthyodectes* from British Cretaceous strata, with descriptions of new species.

Quart. Jour. Geol. Soc., xxxiii, pp. 505-523, with pl. xxii and 1 text figs.

1878 A

Remarks on *Saurocephalus*, and on the species which have been referred to that genus.

Quart. Jour. Geol. Soc., xxxiv, pp. 786-796.

Contains list of genera and species which have been referred to *Saurocephalus*, etc., and bibliography.

- Newton, E. T.**—Continued. 1878 B
Description of a new fish from the lower Chalk of Dover.
Quart. Jour. Geol. Soc., xxxiv, pp. 439-446, with pl. xix.
Discusses the genera *Portheus*, *Daptinus*, and *Ichthyodectes*, and has description and figures of *Daptinus intermedius*.
- 1878 C
The chimæroid fishes of the British Cretaceous rocks.
Mem. Geol. Surv. United Kingdom, Mon. iv, pp. 1-50, with pls. i-xii.
- 1886 A
On the remains of a gigantic species of bird (*Gastornis klaasseni* n. sp.), from the lower Eocene beds near Croydon.
Trans. Zool. Soc. Lond., xii, pp. 143-160, with pls. xxviii, xxix.
- 1888 A
Notes on pterodactyls.
Proc. Geologists' Assoc., x, pp. 406-424, with 13 figs. in the text.
- 1889 A
A contribution to the history of Eocene Siluroid fishes.
Proc. Zool. Soc. Lond., 1889, pp. 201-207, with pl. xxi.
Contains on pp. 206-207 a list of papers on fossil Siluroid fishes.
- 1889 B
On the skull, brain, and auditory organ of a new species of pterosaurian (*Scaphognathus purdoni*) from the Upper Lias, near Whitby, Yorkshire.
Philos. Trans. Royal Soc. Lond., clxxix, pp. 503-537, pls. lxxvii, lxxviii.
- 1892 A
Note on a new species of *Onychodus* from the lower Old Red sandstone of Fairfax.
Geol. Magazine (3), ix, pp. 51-52, with 1 fig. in the text.
Contains list of six known species of *Onychodus*.
- 1899 A
On the remains of *Amia*, from Oligocene strata in the Isle of Wight.
Quart. Jour. Geol. Soc., lv, pp. 1-10, with pl. i.
Describes two new species and gives list of known species.
- Nicholson, Henry Allen, and Lydekker, Richard.** 1889 A
A manual of palæontology for the use of students, with a general intro-
- Nicholson, Henry Allen, and Lydekker, Richard**—Continued.
duction on the principles of palæontology. Third edition.
Vol. ii, pp. i-xi, 889-1624, with figs. 813-1354.
Vol. i of this work treats of the fossil invertebrates; pp. 1475-1560 of vol. ii treats of fossil plants.
- Nickerson, W. S.** 1893 A
The development of the scales of *Lepidosteus*.
Bull. Mus. Comp. Zool., xxiv, pp. 115-139, with pls. i-iv.
- Nitsche, H.** 1891 A
Studien über das Elchwild, *Cervus alces* L. A. Zahnbildung. B. Geweihbildung. C. Bau der Läufe.
Zoolog. Anzeiger, xiv, pp. 181-188, 189-191.
- 1899 A
Ueber die Hirschgeweihe mit mehr als zwei Stangen, und die Hörner Wiederkäuer im Allgemeinen.
Proc. 4th Internat. Cong. Zoology, Cambridge, Eng., 1898, pp. 185-187.
- Noack, Th.** 1894 A
Bemerkungen über die Caniden.
Der Zoolog. Garten, 1894, pp. 165-170; 195-198; 241-246; 260-265.
- Nodot, L.** 1855 A
Description d'un nouveau genre d'Édentaté fossile renfermant plusieurs espèces voisines des glyptodontes et classification méthodique de treize espèces appartenant à ces deux genres.
Comptes rend. Acad. Sci. Paris, xli, pt. 2, pp. 335-338.
Describes new genus *Schistopleurum*.
- Noetling, Fritz.** 1885 A
Die Fauna des samländischen Teritiärs.
Abhandl. zur Specialkarte von Preussen und den Thüringischen Staaten, vi, pt. iii, pp. 1-107, with pls. i-xi.
- Nopcsa, Franz B.** 1899 A
Dinosaurierreste aus Siebenbürgen (Schädel von *Limnosaurus transsylvanicus* nov. gen. et spec.).
Denkschr. k. Akad. Wissensch. Wien, math.-naturw. Cl., lxxviii, pp. 555-59, with pls. i-vi.
Contains a list of Hadrosaurs.
- Nordmann, Alex.** 1862 A
Beiträge zur Kenntniss des Knochenbaues der *Rhytina stelleri*.
Acta Soc. Sci. Fennicæ, vii, pp. 1-33, with pls. i-v.

- Norwood, J. G., and Owen, D. D.** 1846 A
Description of a new fossil fish from the Palæozoic rocks of Indiana.
Amer. Jour. Sci. (2), 1, pp. 367-371, with 2 woodcuts.
- 1846 B
Description of *Macropetalichthys raphidolabis*.
Proc. Boston Soc. Nat. Hist. ii, p. 116.
- Oldham, Thomas.** 1859 A
On some fossil fish-teeth of the genus *Ceratodus*, from Maledi, south of Nagpur.
Mem. Geol. Surv. India, i, pp. 295-309, pls. xiv-xvi.
- Orr, Henry.** 1885 A
Beitrag zur Phylogenie der Ganoïden. Inaugural-Dissertation, Jena.
Pp. 1-37, with 2 figs. in the text.
- Orton, Edw.** 1891 A
On the occurrence of *Megalonyx jeffer-soni* in central Ohio.
Bull. Geol. Soc. Amer., ii, p. 635.
- Orton, James.** 1869 A
The great auk.
Amer. Naturalist, iii, pp. 539-542, with 1 fig.
- Osawa, Gakutaro.** 1898 A
Verhandl. Anat. Gesellsch., 12th meeting, Kiel, 1898, pp. 100-105, with 4 figs. in the text.
- Osborn, H. F.** 1881 A
A memoir upon *Loxolophodon* and *Uintatherium*, two genera of the sub-order *Dinocerata*.
Contrib. E. M. Mus. Geol. and Arch. of the College of New Jersey [Princeton], i, pp. 1-54, pls. i-iv, and map.
Notices of this paper, with 2 figs. of *L. cornutus*, appeared in Amer. Naturalist, xv, p. 888; Amer. Jour. Sci., xxii, p. 235.
- 1883 A
Achænodon, an Eocene bunodont.
Contrib. E. M. Mus. Geol. and Arch.; Princeton Coll., Bull. No. 3, pp. 23-35, with pl. vi, and 8 text figs.
- 1886 A
A new mammal from the American Triassic.
Science, viii, p. 540, with 1 woodcut.
Describes new genus and species, *Microconodon tenuirostris*.
- 1886 B
Observations upon the Triassic mammals *Dromatherium* and *Microconodon*.
Proc. Acad. Nat. Sci. Phila., 1886, pp. 359-363, with 4 woodcuts in the text.
- Osborn, H. F.—Continued.** 1887 A
A pineal eye in the Mesozoic mammals.
Science, ix, p. 92.
- 1887 B
The pineal eye in *Tritylodon*.
Science, ix, p. 114, with 1 woodcut.
- 1887 C
No parietal foramen in *Tritylodon*.
Science, ix, p. 538.
- 1887 D
The origin of the tritubercular type of mammalian dentition.
Science, x, p. 300.
- 1887 E
The Triassic mammals *Dromatherium* and *Microconodon*.
Proc. Amer. Philos. Soc., xxiv, pp. 109-111, with 1 pl.
- 1887 F
On the structure and classification of the Mesozoic *Mammalia*.
Proc. Acad. Nat. Sci. Phila., 1887, pp. 282-292, with 3 figs. in the text.
Review of, in Geol. Magazine, 1888, v, p. 132.
Also in Archiv f. Anthrop., xix, pp. 135-141.
- 1887 G
Note on the genus *Athrodon*.
Amer. Naturalist, xxi, p. 1020.
Athrodon preoccupied, *Kurtodon* substituted.
- 1888 A
Additional observations upon the structure and classification of the Mesozoic *Mammalia*.
Proc. Acad. Nat. Sci. Phila., 1888, pp. 292-301, with 2 figs. in the text.
- 1888 B
The mylohyoid groove in the Mesozoic and recent *Mammalia*.
Amer. Naturalist, xxii, pp. 75-76.
- 1888 C
A review of Mr. Lydekker's arrangement of the Mesozoic *Mammalia*.
Amer. Naturalist, xxii, pp. 232-236.
- 1888 D
Chalicotherium and *Macrotherium*.
Amer. Naturalist, xxii, pp. 728-729.
- 1888 E
The nomenclature of the mammalian molar cusps.
Amer. Naturalist, xxii, pp. 926-928.
- 1888 F
The evolution of the mammalian molars to and from the tritubercular type.
Amer. Naturalist, xxii, pp. 1067-1079, pls. xv, xvi, and 1 woodcut.
Reviewed by M. Schlosser in Archiv f. Anthrop., xix, pp. 157-159.

Osborn, H. F.—Continued. 1888 G

On the structure and classification of the Mesozoic *Mammalia*.

Jour. Acad. Nat. Sci. Phila. (2), ix, pp. 186-265, pls. viii, ix, and 30 figs. in the text.

For review see Nature, xxxviii, pp. 611-614; Amer. Naturalist, xxii, pp. 723-724. Also, H. Winge, 1893 C, p. 117.

1888 H

The characters and phylogeny of the *Amblypoda*.

Science (2), vii, p. 226.

Abstract of paper read before Amer. Morpholog. Society.

1889 A

The evolution of the mammalian teeth to and from the tritubercular type.

Report Brit. Assoc. Adv. Sci., 58th meeting, Bath, 1888, p. 660.

Abstract of paper read before Brit. Assoc. Adv. Sci., and published in full in Amer. Naturalist, 1888, p. 1067.

1890 A

The paleontological evidence for the transmission of acquired characters.

Science, xv, pp. 110-111.

See Amer. Naturalist, xxiii, pp. 559-566. Nature, xli, pp. 227-228; Rep. Brit. Assoc. Adv. Sci. for 1889.

Discusses the evolution of the teeth of *Mammalia*.

1890 B

The paleontological evidence for the transmission of acquired characters.

Proc. Amer. Assoc. Adv. Sci., 38th meeting, Toronto, 1889, pp. 273-276.

1890 C

A review of the Cernaysian *Mammalia*.

Proc. Acad. Nat. Sci. Phila., 1890, pp. 51-62, with 6 figs. in text.

Review by M. Schlosser in Archiv f. Anthrop., xx, pp. 111-112.

1890 D

The *Mammalia* of the Uinta formation. Part III. The *Perissodactyla*. Part IV. The evolution of the ungulate foot.

Trans. Amer. Philos. Soc., xvi, pp. 505-572, with pls. viii-xi, and 12 figs. in the text.

This forms a portion of a joint paper by Professors Scott and Osborn. See Scott, W. B., 1890 A, and Scott and Osborn, 1890 A.

For review by R. L. dekker, see Nature, xliii, p. 177.

1891 A

A review of the Cretaceous *Mammalia*.

Proc. Acad. Nat. Sci. Phila., 1891, pp. 124-135, with 8 figs. in the text.

See also Amer. Naturalist, xxv, pp. 595-611, figs. 1-12.

Osborn, H. F.—Continued. 1891 B

A review of the discovery of the Cretaceous *Mammalia*.

Amer. Naturalist, xxv, pp. 44-45.

Abstract of a review of papers here entered under titles of Marsh, O. C., 1889 D, and Marsh, O. C., 1889 F.

1891 C

A reply to Professor Marsh's "Note on Mesozoic *Mammalia*."

Amer. Naturalist, xxv, pp. 775-783, with 1 fig. in the text.

Review by M. Schlosser in Archiv f. Anthrop., xxii, p. 118.

1891 D

Meniscotheriidae and *Chalicotheriidae*.

Amer. Naturalist, xxv, pp. 911-912.

1891 E

A review of the "Discovery of the Cretaceous *Mammalia*."

Amer. Naturalist, xxv, pp. 595-611, with 12 figs. in the text.

This is a review of papers by Professor Marsh, and is a reprint, with slight changes and additions, of Osborn, H. F., 1891 A.

Abstract in Archiv f. Anthrop., xxii, pp. 117-118.

1892 A

Palæonictis in the American Lower Eocene.

Nature, xlvii, p. 30.

1892 B

What is *Lophiodon*?

Amer. Naturalist, xxvi, pp. 763-765.

1892 C

The ancestry of *Chalicotherium*.

Science, xix, p. 276.

1892 D

A reply to Professor Marsh's "Note on Mesozoic *Mammalia*."

Proc. Amer. Assoc. Adv. Sci., 40th meeting, Washington, 1891, p. 290.

Abstract of Osborn, H. F., 1891 C.

1892 E

Nomenclature of mammalian molar cusps.

Amer. Naturalist, xxvi, pp. 436-437.

1892 F

The contemporary evolution of man.

Amer. Naturalist, xxvi, pp. 455-481, 537-567.

Reviewed by M. Schlosser in Archiv f. Anthrop., xxiii, p. 152.

1892 G

Is *Meniscotherium* a member of the *Chalicotherioidea*?

Amer. Naturalist, xxvi, pp. 506-509, with 4 figs. in the text.

Osborn, H. F.—Continued. 1892 H
 Odontogenesis in the ungulates.
 Amer. Naturalist, xxvi, pp. 621-623.
 A review of paper by Julius Taeker, in
 Morpholog. Jahrbuch, xv, p. 308.

1892 I
 The history and homologies of the
 human molar cusps.

Anatom. Anzeiger, vii, pp. 740-747, with 12
 text figs.

A review of the contributions of Dr. A.
 Fleischmann, Dr. Julius Taeker, and Dr. Carl
 Röse.

1893 A
 The rise of the *Mammalia* in North
 America.

Amer. Jour. Sci., (3) xlvii, pp. 379-392; 448-
 466, with pl. xi and 5 figs. in the text.

For review of this paper, see Nature, xlix,
 pp. 235 and 257.

1893 B
 Fossil mammals of the Upper Creta-
 ceous beds: I. The multituberculates;
 II. The trituberculates; III. Faunal
 relations of the Laramie mammals.

Bull. Amer. Mus. Nat. Hist., v, pp. 311-330,
 with pls. vii, viii, and 3 text figs.

Abstract of, by M. Schlosser, in Archiv f.
 Anthropol., xxiv, pp. 126-127.

1893 C
Aceratherium tridactylum from the
 Lower Miocene of Dakota.

Bull. Amer. Mus. Nat. Hist., v, pp. 85-86.

1893 D
 The rise of the *Mammalia* in North
 America.

Studies from the biological laboratories of
 Columbia College; Zoology. Ginn & Co., Bos-
 ton, 1893. Pp. 1-45, with 1 pl. and 5 text figs.

Vice-presidential address before the Amer.
 Assoc. for the Advance of Science, Madison,
 Wis., Aug. 17, 1893. Same as Osborn, 1893 A.

Abstract of, by M. Schlosser, in Archiv f.
 Anthropol., xxiv, pp. 123-124.

1893 E
 The collection of fossil mammals in
 the American Museum of Natural His-
 tory, New York.

Science, xxi, p. 261.

1893 F
 The *Ancylopoda*, *Chalicotherium*, and
Artionyx.

Amer. Naturalist, xxvii, pp. 118-133, with 4
 figs. in the text.

Abstract of, by M. Schlosser, in Archiv f.
 Anthropol., xxiv, pp. 125-126.

1893 G
 Recent researches upon the succes-
 sion of the teeth in mammals.

Amer. Naturalist, xxvii, pp. 493-508.

Noticed by M. Schlosser, in Archiv f. An-
 thropol., xxiv, p. 136.

Osborn, H. F.—Continued. 1893 H
 Sur la découverte du *Palæonictis* en
 Amérique.

Bull. Soc. Géol. France (3), xx, pp. 434-436,
 with 1 fig. in the text.

Describes the new species *P. occidentalis* Osb.

1893 I
Protoceras, the new artiodactyle.
 Nature, xlvii, pp. 321-322, with 3 figs. in the
 text.

1893 J
Artionyx, a clawed artiodactyle.
 Nature, xlvii, pp. 610-611, with 3 figs. in the
 text.

1893 K
 Foot of *Artionyx*.
 Anatom. Anzeiger, viii, p. 368.
 Report of meeting of N. Y. Acad. Sci.

1893 L
Protoceras celer.
 Anatom. Anzeiger, viii, pp. 127-128.
 In reports of meeting of N. Y. Acad. Sci.

1894 A
 A division of the Eutherian mammals
 into the *Mesoplacentalia* and *Cenoplacenta-*
lia.
 Trans. N. Y. Acad. Sci., xiii, pp. 234-237.

1895 A
 Fossil mammals of the Uinta Basin.
 Bull. Amer. Mus. Nat. Hist., vii, pp. 71-105,
 with 17 figs. in the text.
 Reviewed by M. Schlosser in Archiv f.
 Anthropol., xxv, p. 181-182.

1895 B
 Vertebrate paleontology in the Amer-
 ican Museum.
 Science (2), ii, pp. 178-179.

1895 C
 The history of the cusps of the human
 molar teeth.

Internat. Dental Jour., 1895.

Quoted from reprint, pp. 1-14, with pl. AA
 and text figs. A-D.

1896 A
 Titanotheres of the American Museum
 of Natural History.

Amer. Naturalist, xxx, p. 162.

Secretary's report of the session of the New
 York Academy of Science, Dec. 9, 1895. Also
 found in Anatom. Anzeiger, xi, p. 512 and
 Zoolog. Anzeiger, xix, p. 48.

1896 B
 The cranial evolution of *Titanothe-*
rium.

Bull. Amer. Mus. Nat. Hist., viii, pp. 157-197,
 with pls. iii and iv and 15 figs. in the text.

Notice of this paper by M. Schlosser in Neues
 Jahrb. Mineral., 1899, ii, pp. 319-321, and in
 Archiv f. Anthropol., xxv, p. 216.

Osborn, H. F.—Continued. 1896 C

Prehistoric quadrupeds of the Rockies.
The Century Magazine, lii, pp. 705-715, with
8 engravings illustrating restorations of fossil
mammals.

1897 A

Lambdaotherium not related to *Palæo-
syops* or the *Titanotheres*.

Amer. Naturalist, xxxi, pp. 55-57.

1897 B

Reconstruction of *Phenacodus pri-
mævus*, the most primitive ungulate.

Amer. Naturalist, xxxi, p. 980.

A synopsis of a paper read before the Brit.
Assoc. Adv. Sci. at Toronto, 1897.

An abstract of this paper is found on p. 684
of the report of the meeting.

1897 C

Trituberculy: A review dedicated to
the late Professor Cope.

Amer. Naturalist, xxxi, pp. 993-1016.

Appended is a bibliography of the subject.
The paper is reviewed by M. Schlosser in
Neues Jahrb. Mineral, 1901, i, p. 151.

1897 D

Report on the phylogeny of the early
Eocene Titanotheres.

Anatom. Anzeiger, xiii, p. 551.

Report of paper read before New York Bio-
logical Society, Apr. 5, 1897. See also Science
(2), vi, p. 107.

1897 E

The origin of the teeth of the *Mam-
malia*.

Science (2), v, pp. 576-577.

1897 F

The *Ganodonta*, or primitive Eden-
tates with enameled teeth.

Science (2), v, pp. 611-612.

1897 G

The Huerfano Lake basin, southern
Colorado, and its Wind River and
Bridger fauna.

Bull. Amer. Mus. Nat. Hist., ix, pp. 247-258.

Brief review in Neues Jahrb. Mineral., 1900,
p. 182.

1898 A

Paleontological problems.

Science (2), vii, pp. 145-147.

1898 B

Origin of the *Mammalia*.

Science (2), vii, pp. 176-178.

Discussion before Amer. Soc. Naturalists.

1898 C

A complete skeleton of *Teleoceras*, the
true rhinoceros from the upper Miocene
of Kansas.

Science (2), vii, pp. 554-557, with 1 fig. in the
text.

Osborn, H. F.—Continued. 1898 D

The life and works of Cope, illustrat-
ing the training of a naturalist and the
essential characteristics of a great com-
parative anatomist.

Preface to second edition of Professor Cope's
Syllabus of Lectures on the *Vertebrata*, pp.
iii-xxxv.

1898 E

A complete skeleton of *Teleoceras fos-
siger*. Notes upon the growth and
sexual characters of this species.

Bull. Amer. Mus. Nat. Hist., x, pp. 51-59,
with pls iv, iv A.

1898 F

A complete skeleton of *Coryphodon
radians*.

Bull. Amer. Mus. Nat. Hist., x, pp. 81-91,
with pl. x and 2 figs. in the text.

1898 G

Remounted skeleton of *Phenacodus
primævus*. Comparison with *Euproto-
gonia*.

Bull. Mus. Nat. Hist., x, pp. 159-164, with
pl. xii and 4 text figs.

1898 H

Evolution of the *Amblypoda*. Part
I. *Taligrada* and *Pantodonta*.

Bull. Amer. Mus. Nat. Hist., x, pp. 169-218,
with 29 figs. in the text.

1898 I

The extinct rhinoceroses.

Mem. Amer. Mus. Nat. Hist., i, pp. 75-164,
with pls. xiiA-xx, with 49 figs. in the text.

Pp. 121-125 of this memoir are devoted to the
bibliography of the rhinoceroses.

A notice of this memoir is found in Natural
Science, 1898, xiii, pp. 151-159.

1898 J

Additional characters of the great
herbivorous dinosaur *Camarasaurus*.

Bull. Amer. Mus. Nat. Hist., x, pp. 219-233,
with 13 figs. in the text.

1898 K

Paleontological notes.

Science (2), vii, pp. 164-165.

1898 L

A placental marsupial.

Science (2), vii, pp. 454-456, with 1 fig. in the
text.

1898 M

A complete skeleton of *Coryphodon
radians*. Notes upon the locomotion
of this animal.

Science (2), vii, pp. 585-588, with 1 fig. in the
text.

Osborn, H. F.—Continued. 1898 N
Models of extinct vertebrates.
Science (2), vii, pp. 841-845, with text figs. 1-4.

1898 O
[Origin of *Mammalia*.]
Science (2), viii, p. 358.
Abstract of remarks at International Congress of Zoologists at Cambridge, England.

1898 P
On the presence of a frontal horn in *Aceratherium incisivum* Kaup.
Science (2), viii, p. 880.
A brief abstract. *Aceratherium* not a hornless rhinoceros.

1898 Q
Casts, models, photographs, and restorations of fossil vertebrates.
Pamphlet issued by Department of Vertebrate Palaeontology, Amer. Mus. Nat. Hist., pp. 1-21, with 7 illus.
Remarks on this pamphlet are found in Natural Science, 1898, xiii, p. 230.

1898 R
The origin of *Mammalia*.
Amer. Naturalist, xxxii, pp. 309-334, with 14 text figs.
Reviewed in Neues Jahrb. Mineral., 1900, ii, pp. 135-138.

1899 A
Frontal horn on *Aceratherium incisivum*. Relation of this type to *Elasmotherium*.
Science (2), ix, pp. 161-162, with pl. i.

1899 B
The origin of mammals.
Amer. Jour. Sci. (4), vii, pp. 92-96.

1899 C
Additional characters of *Diplodocus*.
Science (2), ix, pp. 315-316.

1899 D
A complete mosasaur skeleton, osseous and cartilaginous.
Mem. Amer. Mus. Nat. Hist., i, pp. 167-188, with pls. xxi-xxiii and 13 text figs.
See also, for extract from this paper, Science (2), x, 1899, pp. 919-925, figs. 1-3; for review, Neues Jahrb. Mineral., 1901, i, p. 156.

1899 E
A skeleton of *Diplodocus*.
Mem. Amer. Mus. Nat. Hist., i, pp. 191-214, with pls. xxiv-xxviii and 14 text figs.
An extract of this paper was published in Science (2), x, pp. 870-874, with fig. 1.
Reviewed in Neues Jahrb. Mineral., 1901, i, p. 156.

Osborn, H. F.—Continued. 1899 F
Upon the structure of *Tylosaurus dyspelor*, including the cartilaginous sternum.
Science (2), ix, pp. 912-913.
Brief synopsis of paper read before New York Academy of Sciences. See Osborn, H. F., 1899 D.

1899 G
The Newburgh mastodon.
Science (2), x, p. 539.

1899 H
Fore and hind limbs of carnivorous dinosaurs from the Jurassic of Wyoming. Dinosaur contributions, No. 3.
Bull. Amer. Mus. Nat. Hist., xii, pp. 161-172, with 7 figs. in the text.
Abstract in Neues Jahrb. Mineral., 1901, ii, p. 305.

1899 I
[Review of Arthur Smith Woodward's Outlines of vertebrate palaeontology for students of zoology.]
Natural Science, xiv, pp. 156-159.

1900 A
Intercentra and hypapophyses in the cervical region of mosasaurs, lizards, and *Sphenodon*.
Amer. Naturalist, xxxiv, pp. 1-7, with 4 figs. in the text.
An abstract of this paper was published in Science, x, 1899, p. 896.

1900 B
Recent zoöpaleontology.
Science (2), xi, pp. 115-116.

1900 C
The geological and faunal relations of Europe and America during the Tertiary period and the theory of the successive invasions of an African fauna.
Science (2), xi, pp. 561-574.

1900 D
Recent zoöpaleontology.
Science (2), xii, pp. 767-769, with 1 text fig.
Refers to finding of *Trigonia osborni* Lucas, and *Archelon* Wieland.

1900 E
Phylogeny of the rhinoceroses of Europe.
Science (2), xii, p. 885.
An abstract of a paper read before the N. Y. Acad. Sci.

1900 F
The angulation of the limbs of *Proboscidea*, *Dinocerata*, and other quadrupeds in adaptation to weight.
Amer. Naturalist, xxxiv, pp. 89-94, with 7 figs. in the text.

Osborn, H. F.—Continued. 1900 G
Reconsideration of the evidence for a common dinosaur-avian stem in the Permian.
Amer. Naturalist, xxxiv, pp. 777-799, with 12 figs. in the text.

1900 H
Phylogeny of the rhinoceroses of Europe.

Bull. Amer. Mus. Nat. Hist., xiii, pp. 229-267, with 16 figs. in the text.

1900 I
Oxyaena and *Patriofelis* restudied as terrestrial creodonts.

Bull. Amer. Mus. Nat. Hist., xiii, pp. 269-279, with pls. xviii, xix, and 8 figs. in the text.

1900 J
Origin of the *Mammalia*. III. Occipital condyles of reptilian tripartite type.

Amer. Naturalist, xxxiv, pp. 943-947, with 3 figs in the text.

1900 K
Correlation between Tertiary mammal horizons of Europe and America. An introduction to the more exact investigation of Tertiary zoögeography. Preliminary study with third trial sheet.

Ann. N. Y. Acad. Sci., xiii, pp. 1-72.

Pp. 59-64 are occupied by a bibliography of the subject; pp. 65-72 by a list of the scientific publications of the author.

Osborn, H. F. and Earle, Charles.

1895 A
Fossil mammals of the Puerco beds. Collection of 1892.

Bull. Amer. Mus. Nat. Hist., vii, pp. 1-70, with 21 figs. in the text.

Reviewed by W. B. Scott in Science (2), i, p. 660, and by M. Schlosser in Archiv f. Anthrop., xxv, pp. 176-179.

Osborn, H. F., Scott, W. B., and Speir, Francis, jr.

1878 A
Palæontological report of the Princeton scientific expedition of 1877.

Contrib. Mus. Geol. and Arch., Princeton College, No. 1, pp. 1-107, with pls. A, i-x.

Followed by systematic catalogue of the Eocene vertebrates of Wyoming, pp. 131-146.

Osborn, H. F., and Speir, F. jr. 1879 A
The lower jaw of *Loxolophodon*.

Amer. Jour. Sci., xvii, 304-309, with pl. ii.

Osborn, H. F., and Wortman, J. L. 1892 A
Fossil mammals of the Wahsatch and Wind River beds. Collection of 1891.

Bull. Amer. Mus. Nat. Hist., iv, pp. 80-147 with pl. iv and 18 figs. in text.

I. Homologies and nomenclature of the mammalian molar cusps (H. F. O.), p. 84.

II. The classification of the *Perissodactyla* (H. F. O.), p. 90.

III. The ancestry of the *Felidae* (J. L. W.), p. 94.

IV. Taxonomy and morphology of the primates, creodonts, and ungulates; 1, Wahsatch; 2, Wind River (H. F. O.), p. 101.

V. Geological and geographical sketch of the Big Horn Basin (J. L. W.), p. 135.

VI. Narrative of the expedition (J. L. W.), p. 144.

For remarks on portions of this paper see Natural Science, ii, pp. 404-405; also, for abstract, Archiv f. Anthrop., xxiii, pp. 136-138.

1892 B
Characters of *Protoceras* (Marsh), the new artiodactyl from the Lower Miocene.

Bull. Amer. Mus. Nat. Hist., iv, pp. 351-371, figs. 1-6.

Abstract of, by M. Schlosser, in Archiv f. Anthrop., xxiii, pp. 135-136.

1893 A
Artionyx, a new genus of *Ancylopoda*. Appendix [p. 17]: On the mechanics of the artiodactyl tarsus.

Bull. Amer. Mus. Nat. Hist., v, pp. 1-18, with 8 text figures.

Remarks on this paper in Natural Science, ii, p. 326.

1894 A
Fossil mammals of the Lower Miocene White River beds. Collection of 1892.

Bull. Amer. Mus. Nat. Hist., vi, pp. 199-228, with pls. ii and iii, and 8 figs. in the text.

Abstract of, by M. Schlosser in Archiv f. Anthrop., xxiv, pp. 167-168.

1895 A
Perissodactyls of the Lower Miocene White River beds.

Bull. Amer. Mus. Nat. Hist., vii, pp. 343-375, with pls. viii-xi and 12 figs. in the text.

Reviewed by M. Schlosser in Archiv f. Anthrop., xxv, pp. 179-181.

Owen, David Dale. 1842 A
Regarding human footprints in solid limestone.

Amer. Jour. Sci., xliii, pp. 14-32, with 1 pl.

Owen, David Dale—Continued. 1857 A
Report of the geological survey in Kentucky, made during the years 1854 and 1855.

Amer. Jour. Sci. (2), xxiii, pp. 272-276.

An editorial notice of the above report made by D. D. Owen.

See also **Norwood and Owen**.

Owen, D. D., Norwood, J. G., and Evans, John. 1850 A

Notice of fossil remains brought by Mr. J. Evans from the Mauvais Terres, or bad lands of White River, 150 miles west of the Missouri.

Proc. Acad. Nat. Sci., v, pp. 66-67.

Owen, Richard. 1832 A

On the anatomy of the weasel-headed armadillo (*Dasypus 6-cinctus* L.).

Proc. Zool. Soc. Lond., pt. ii, 1832, pp. 134-138.

1835 A

On the comparative osteology of the orang and chimpanzee.

Proc. Zool. Soc. Lond., 1835, pt. iii, pp. 30-40.

1838 A

On the osteology of the *Marsupialia*.

Proc. Zool. Soc. Lond., 1838, pt. vi, pp. 120-147.

1838 B

On the dislocation of the tail at a certain point, observable in the skeletons of many *Ichthyosauri*.

Proc. Geol. Soc. Lond., ii, pp. 660-662.

1839 A

Outlines of a classification of the *Marsupialia*.

Proc. Zool. Soc. Lond., 1839, pt. vii, pp. 5-19.

1839 B

Observations on the teeth of the *Zeuglodon*, *Basilosaurus* of Dr. Harlan.

Proc. Geol. Soc. Lond., iii, pp. 24-28.

Also in Lond. and Edinb. Philos. Mag., xiv, pp. 302-307; Ann. Nat. Hist., 1839, iii, pp. 210-213; Ann. Sci. Naturelles (2), xii, Zool. 1839, pp. 222-229.

1839 C

Description of the *Lepidosiren annectens*.

Trans. Linn. Soc. Lond., xviii, pp. 327-361, with pls. xxiii-xxvii.

1839 D

Observations on the fossils representing the *Thylacotherium prevostii* (Valenciennes), with reference to the doubts of its mammalian and marsupial na-

Owen, Richard—Continued.

tures, and on *Phascolotherium bucklandi*. Pt. I. On the *Thylacotherium*. Pt. II. On the *Phascolotherium*.

Trans. Geol. Soc. Lond. (2), vi, pp. 41-65, with pl. v.

1840 A

Report on British fossil reptiles. Pt. I.

Report of Brit. Assoc. Adv. Sci., 9th meeting, Birmingham, 1839, pp. 43-126.

1840 B

Description of a tooth and part of the skeleton of the *Glyptodon clavipes*, a large quadruped of the Edentate order, to which belongs the tessellated armour described and figured by Mr. Clift in the former volume of the Transactions of the Geological Society, with a consideration of the question whether the *Megatherium* possessed an analogous dermal armour.

Trans. Geol. Soc. Lond. (2), vi, pp. 81-106, with pls. x-xiii.

For preliminary description see Proc. Geol. Soc. Lond., iii, 1840, p. 108.

1840 D

Note on the dislocation of the tail at a certain point observable in the skeletons of many *Ichthyosauri*.

Trans. Geol. Soc. Lond. (2), v, pp. 511-514, with pl. xlii.

1840 E

A description of a specimen of the *Plesiosaurus macrocephalus*, Conybeare, in the collection of Viscount Cole, M. P., D. C. L., F. G. S., etc.

Trans. Geol. Soc. Lond. (2), v, pp. 515-535, with pls. xliii-xlv.

1840 F

Fossil *Mammalia*.

The zoology of the voyage of H. M. S. Beagle. Part i, pp. 13-111, with pls. i-xxxii.

1840 G

Description of the fossil remains of a mammal, a bird, and a serpent from the London clay.

Proc. Geol. Soc. Lond. iii, pp. 162-166.

The genera *Lithornis* and *Palaeophis* are established.

1841 A

A description of some of the soft parts, with the integument, of the hind-fin of the *Ichthyosaurus*, indicating the shape of the fin when recent.

Trans. Geol. Soc. Lond. (2), vi, pp. 199-201, with pl. xx.

Owen, Richard—Continued. 1841 B
Description of some ophidiolites (*Palæophis toliapicus*) from the London clay at Sheppey, indicative of an extinct species of serpent.

Trans. Geol. Soc. Lond. (2), vi, pp. 209-210, with pl. xxii.

1841 C
Observations on the *Basilosaurus* of Dr. Harlan (*Zeuglodon cetoides* Owen).
Trans. Geol. Soc. Lond. (2), vi, pp. 69-79, with pls. vii-ix.

1841 D
On the teeth of species of the genus *Labyrinthodon* (*Mastodonsaurus salamandroides* and *Phytosaurus* (?) of Jaeger, from the German Keuper and the sandstone of Warwick and Leamington.

Ann. and Mag. Nat. Hist., viii, pp. 58-61.

Taken from Proc. Geol. Soc. Lond., iii, pp. 359-397.

1841 E
A description of a portion of the skeleton of the *Cetiosaurus*, a gigantic extinct saurian, occurring in the Oolitic formation of different portions of England.

Proc. Geol. Soc. Lond., iii, pp. 457-462.

1841 F
On the structure of fossil teeth from the central or Corn-stone division of the Old Red sandstone, indicative of a new genus of fishes, or fish-like *Eatrachia*, for which is proposed the name of *Dendrodus*.

Micros. Journ. and Struct. Record, i, pp. 1-4; 17-20, with 7 figs. in the text.

1842 A
Report on British fossil reptiles. Part II.

Report Brit. Assoc. Adv. Sci., 11th meeting, Plymouth, 1841, pp. 60-204.

1842 B
On the teeth of a species of the genus *Labyrinthodon* (*Mastodonsaurus* of Jaeger), common to the German Keuper formation and the lower sandstone of Warwick and Leamington.

Trans. Geol. Soc. Lond. (2); vi, pp. 503-513.

1842 C
Description of parts of the skeleton and teeth of five species of the genus *Labyrinthodon* . . . with remarks on the

Owen, Richard—Continued.

probable identity of *Cheirotherium* with this genus of extinct batrachians.

Trans. Geol. Soc. Lond., vi, pp. 515-543, with pls. xliii-xlvii.

1842 D
Description of the skeleton of an extinct gigantic sloth, *Myiodon robustus*, Owen, with observations on the osteology, natural affinities, and probable habits of the megatheroid quadrupeds in general.

Pp. 1-176, with pls. i-xxiv. London, 1842, 4to.

1842 E
Report on the *Missourium* now exhibiting at the Egyptian Hall, with an inquiry into the claims of *Tetracaulodon* to generic distinction.

Proc. Geol. Soc. Lond., iii, pp. 689-695.

1843 A
Report on the British fossil *Mammalia*. Part I. *Unguiculata* and *Cetacea*.
Report Brit. Assoc. Adv. Sci., 12th meeting, Manchester, 1842, pp. 54-74.

1843 B
On Dr. Harlan's notice of new fossil *Mammalia*.

Amer. Jour. Sci., xlv, pp. 341-345.

Letter from Professor Owen regarding *Orycterotherium*, *Myiodon*, and *Megatherium*.

1844 A
Report on the British fossil *Mammalia*. Part II. *Ungulata*.
Report Brit. Assoc. Adv. Sci., 13th meeting, Cork, 1843, pp. 208-241.

1845 A
Account of various portions of the *Glyptodon*, an extinct quadruped, allied to the armadillo, and recently obtained from the Tertiary deposits in the neighborhood of Buenos Ayres.

Quart. Jour. Geol. Soc., i, pp. 257-262.

1845 B
Odontography; or a treatise on the comparative anatomy of the teeth, etc.
Vol. i, text, pp. i-lxxiv, 1-655; Vol. ii, atlas, pls. i, ii, 1-150. London, 1840-1845.

Due to repetitions of numbers on pls.; there are altogether 168.

For dates of publication see Woodward and Sherborn, 1890 A.

1845 C
Reply to some observations of Prof. Wagner on the genus *Myiodon*.
Ann. and Mag. Nat. Hist. (1), xvi, pp. 100-102.

Owen, Richard—Continued. 1845 D

Description of certain fossil crania discovered by A. G. Bain, esq., in the sandstone rocks at the southeastern extremity of Africa, referable to different species of an extinct genus of *Reptilia* (*Dicynodon*), and indicative of a new tribe or suborder of *Sauria*.

Trans. Geol. Soc., London (2), vii, pp. 59-84, with pls. iii-vi.

1846 A

Observations on certain fossils from the collection of the Academy of Natural Sciences of Philadelphia.

Proc. Acad. Nat. Sci. Phila., iii, pp. 93-96.

Reference to this paper is made in Amer. Jour. Sci., iii, 1847, p. 125.

1846 B

A history of British fossil mammals and birds.

Pp. i-xlvi; 1-560. Illustrated by 237 woodcuts. London.

1846 C

[Extracts from letters to Dr. S. G. Morton on *Dorudon* of Gibbes.]

Jour. Acad. Nat. Sci. Phila., i, pp. 9-10.

This forms a portion of Dr. Gibbes's paper on *Basilosaurus*, Gibbes, R. W., 1847 B.

1846 D

On the fossil genus *Dorudon*.

Proc. Acad. Nat. Sci., Phila., iii, p. 15.

Abstract of letter stating that *Dorudon* of Gibbes is same as *Zeuglodon*.

1847 A

General geological distribution and probable food and climate of the mammoth.

Amer. Jour. Sci. (2), iv., pp. 13-19.

Extracted from Owen's British Fossil Mammalia.

1847 B

Report on the archetype and homologies of the vertebrate skeleton. Part I. Special homology. Part II. General homology.

Report Brit. Assoc. Adv. Sci., 16th meeting, Southampton, 1846, pp. 169-340, with 28 woodcuts and 3 tables.

1847 C

Notices of some fossil *Mammalia* of South America.

Report Brit. Assoc. Adv. Sci., 16th meeting, Southampton, 1846, pp. 65-67.

1847 D

Observations on certain fossil bones from the collection of the Academy of Natural Sciences of Philadelphia.

Jour. Acad. Nat. Sci. Phila. (2), i, pp. 18-20.

Collection made in digging canal near Brunswick, Ga.

Owen, Richard—Continued. 1847 E

Description of the atlas, axis, and subvertebral wedge-bones in the *Plesiosaurus*, with remarks on the homologies of those bones.

Ann. and Mag. Nat. Hist. (1), xx, pp. 217-225, with 6 figs. in the text.

1848 A

Description of teeth and portions of jaws of two extinct anthracotheroid quadrupeds (*Hyopotamus vectianus* and *H. bovinus*) discovered by the Marchioness of Hastings in the Eocene deposits on the N. W. coast of the Isle of Wight, with an attempt to develop Cuvier's idea of the classification of pachyderms by the number of their toes.

Quart. Jour. Geol. Soc., iv, pp. 104-141, pls. vii-viii, with 13 figs. in text.

1849 A

Notes on remains of fossil reptiles discovered by Prof. Henry Rogers, of Pennsylvania, U. S., in Green-sand formations of New Jersey.

Quart. Jour. Geol. Soc., v, pp. 380-383, with pls. x-xi.

1849 B

Monograph on the fossil *Reptilia*. Part I. *Chelonia*.

Palæontographical Society, ii, pp. 1-76, 38 pls.

The above is a joint paper by Professors Owen and Bell.

1849 C

On the development and homologies of the carapace and plastron of the chelonian reptiles.

Philos. Trans. Roy. Soc. Lond., pp. 151-170, with pl. 13, and 9 figs in the text.

1850 A

Monograph of the fossil *Reptilia* of the London clay. Part II. *Crocodylia*, *Ophidia*.

Palæontographical Society, iii, pt. 2, pp. 1-68, pls. xxix; i-xvi.

1850 B

On the communications between the cavity of the tympanum and the palate in the *Crocodylia* (gavials, alligators, and crocodiles).

Philos. Trans. Roy. Soc. Lond., 1850, pp. 521-527, with pls. xi-xlii.

1851 A

On a new species of pterodactyle (*P. compressirostris*, Owen) from the Chalk, with some remarks on the

Owen, Richard—Continued.

nomenclature of the previously described species.

Proc. Zool. Soc. Lond., 1851, pt. xix, pp. 21-34, with pl. v.

1851 B

Monograph on the fossil *Reptilia* of the Cretaceous formations.

* Palæontographical Society, v, pp. 1-118, pls. i-xxxvii.

1851 C

On the *Megatherium* (*M. americanum* Cuv. & Blum). Part I. Preliminary observations on the exogenous processes of vertebræ.

Philos. Trans. Roy. Soc. Lond., 1851, pp. 719-764; pls. xliiv-lilii.

1852 A

Comparison of the modifications of the osseous structure of the *Megatherium* with that in other known existing and extinct species of the class *Mammalia*.

Amer. Jour. Sci. (2), xiv, pp. 91-97.

Abstract of a memoir read by Professor Owen to the Royal Society of London, cited from Jameson's Edinb. Jour., li, 350.

1852 B

On the fossil *Mammalia* from the Eocene fresh-water formation at Hardwell, Hants.

Report Brit. Assoc. Adv. Sci., 21st meeting, Ipswich, 1851, p. 67.

1853 A

On the anatomy of the walrus.

Proc. Zool. Soc. Lond., 1853, pt. xxi, pp. 103-106.

Among other things this paper treats of the dentition.

1853 B

A monograph of the fossil chelonian reptiles of the Wealden clays and Purbeck limestones.

Palæontographical Society, vii, pp. 1-12, pls. i-ix.

1853 C

Notes on the above-described fossil remains.

Quart. Jour. Geol. Soc., ix, pp. 66-67, with pls. ii, iii

Discusses relationships of the bones discovered by Lyell and Dawson in Nova Scotia, and assigns to them the name *Dendroperon acadianum*.

Owen, Richard—Continued. 1853 D

Notice of a batrachoid fossil in British Coal shale.

Quart. Jour. Geol. Soc., ix, pp. 67-70, with pl. ii.

Describes and figures *Parabatrachus* (type *P. colei*), *Megalichthys*, and *Centrodus*.

1854 A

On a fossil imbedded in a mass of Pictou coal from Nova Scotia.

Quart. Jour. Geol. Soc., x, pp. 207-208 with pl. ix.

1854 B

Monograph on the fossil *Reptilia* of the Wealden formations. Part II. *Dinosauria*.

Palæontographical Society, viii, pp. 1-54, pls. i-xix.

1854 C

On some fossil reptilian and mammalian remains from the Purbecks.

Quart. Jour. Geol. Soc., x, pp. 420-433, with 12 figs. in the text.

1855 A

Additional remarks on the skull of the *Baphetes planiceps*, Ow.

Quart. Jour. Geol. Soc., xi, pp. 9-10.

1855 B

On the *Megatherium* (*M. americanum* Cuv. & Blum). Part II. Vertebræ of the trunk.

Philos. Trans. Roy. Soc. Lond., cxlv., pp. 359-388, pls. xxii-xxvii.

1855 C

On the fossil skull of a mammal (*Prorastomus sirenoides*, Owen) from the island of Jamaica.

Quart. Jour. Geol. Soc., xi, pp. 541-543, with pl. xv.

1856 A

Monograph on the fossil *Reptilia* of the Wealden formations. Part III. *Megalosaurus bucklandi*.

Palæontographical Society, ix, pp. 1-26, pls. i-xii.

1856 B

On the *Megatherium* (*M. americanum* Cuv. & Blum). Part III. The skull.

Philos. Trans. Roy. Soc. Lond., cxlvi, pp. 571-589, pls. xxi-xxvi.

1856 C

Description of a fossil cranium of the musk-buffalo [*Bubalus moschatus* Owen; *Bos moschatus* (Zimm. & Gmel.) Pallas; *Bos pallasii*, Dekay; *Ovibos pallasii*, H.

Owen, Richard—Continued.

Smith & Bl.] from the "lower-level drift" at Maidenhead, Berkshire.

Quart. Jour. Geol. Soc., xii, pp. 124-131, with 6 figs. in the text.

1856 D

Description of the skull of a large species of *Dicynodon* (*D. tigriceps*, Ow.), transmitted from South Africa by A. G. Bain, esq.

Trans. Geol. Soc. Lond. (2), vii, pp. 233-240, with pls. xxix-xxxii.

1856 E

On parts of the trunk of the *Dicynodon tigriceps*.

Trans. Geol. Soc. Lond. (2), vii, pp. 241-247, with pls. xxxiii-xxxiv.

1856 F

On the affinities of the large extinct bird (*Gastornis parisiensis*) indicated by a fossil femur and tibia discovered in the lowest Eocene formation near Paris.

Quart. Jour. Geol. Soc., xii, pp. 204-217, with pl. iii.

The structure of the tibia and femur in the various orders of birds and a number of genera is discussed.

1857 A

On the ruminant quadrupeds and the aboriginal cattle of Great Britain.

Amer. Jour. Sci. (2), xxiii, pp. 132-136.

From Proc. Roy. Inst. Great Britain, May, 1856.

1857 B

Monograph on the fossil *Reptilia* of the Wealden formation. Part IV.

Palæontographical Society, x, pp. 1-26, pls. i-xi.

Treats of *Iguanodon* and *Hylæosaurus*.

1857 C

Description of a small Lophiodont mammal (*Phiolophus vulpiceps*, Owen) from the London clay, near Harwich.

Quart. Jour. Geol. Soc., xiv, pp. 54-71, with double pls. ii, iii, iv.

1857 D

Description of the lower jaw and teeth of an Anoplotheroid quadruped (*Dichobune ovina*, Ow.) of the size of the *Xiphodon gracilis*, Cuv., from the Upper Eocene marl, Isle of Wight.

Quart. Jour. Geol. Soc., xiii, pp. 254-260, with pl. viii.

Owen, Richard—Continued. 1858 A

On the characters, principles of division, and primary groups of the class *Mammalia*.

Amer. Jour. Sci. (2), xxv, pp. 7-18; 177-198.

From Jour. of Proc. Linn. Soc., Lond., 1857.

1858 B

Notes and additions [in Buckland's *Geology and Mineralogy*].

See Buckland, W., 1858 A.

1858 C

On the *Megatherium* (*M. americanum*, Cuv. and Blum.) Part IV. Bones of the anterior extremities.

Philos. Trans. Roy. Soc. Lond., cxlviii, pp. 261-278, pls. xviii-xxii.

1859 A

On a new genus (*Dimorphodon*) of pterodactyle, with remarks on the geological distribution of flying reptiles.

Report Brit. Assoc. Adv. Sci., 28th meeting, Leeds, 1858, pp. 97-98.

1859 B

On remains of new and gigantic species of pterodactyle (*Pter. filtoni* and *Pter. sedgwickii*) from the upper Greensand near Cambridge.

Report Brit. Assoc. Adv. Sci., 28th meeting, Leeds, 1858, pp. 98-103.

1859 C

On the gorilla (*Troglodytes gorilla*, Sav.).

Proc. Zool. Soc. London, 1859, pt. xxvii, pp. 1-23.

1859 D

Monograph on the fossil *Reptilia*. Including supplement No. 1, Cretaceous *Pterosauria*, and No. 2, Wealden *Crocodylia*.

Palæontographical Society, xi, pp. 1-44, pls. i-xii.

1860 A

On the orders of fossil *Reptilia* and their distribution in time.

Report Brit. Assoc. Adv. Sci., 29th meeting, Aberdeen, 1859, pp. 153-166.

1860 B

Monograph of the fossil *Reptilia* of the Cretaceous and Purbeck strata, including supplement No. III, Cretaceous *Pterosauria* and *Sauropterygia*. Supplement No. II, *Iguanodon* and Purbeck *Latertia*.

Palæontographical Society, xii, pp. 1-39, pls. i-viii.

Owen, Richard—Continued. 1860 C

On the vertebral characters of the order *Pterosauria*, as exemplified in the genera *Pterodactylus* (Cuvier) and *Dimorphodon* (Owen).

Philos. Trans. Roy. Soc. Lond., cxlix, pp. 161-169, with 10 pls.

1860 D

On the *Megatherium* (*M. americanum* Cuv. & Blum.). Part. V. Bones of the posterior extremities.

Philos. Trans. Roy. Soc. Lond., vol. cxlix, pp. 809-829, pls. xxxvii-xli.

1860 E

Palæontology; or, a systematic summary of extinct animals and their geological remains.

Pp. i-xv, 1-420, with 141 figs., Edinburgh, 1860. A second edition was published in 1861.

1860 F

On some reptilian fossils from South Africa.

Quart. Jour. Geol. Soc., xvi, pp. 49-63, with pls. i-iii.

1862 A

Description of specimens of fossil *Reptilia* discovered in the Coal-measures of the South Joggins, Nova Scotia, by Dr. J. W. Dawson.

Quart. Jour. Geol. Soc., xviii, pp. 238-244, with pls. ix-x.

1863 A

(I) On the Dicynodont *Reptilia*, with a description of some fossil remains brought by H. R. H. Prince Alfred from South Africa, November, 1860. (II) On the pelvis of *Dicynodon*. (III) Notice of a skull and parts of the skeleton of *Rhynchosaurus articeps*.

Philos. Trans. Roy. Soc. Lond., clii, pp. 455-467, with pls. xix-xxv.

1864 A

On the skeleton of the gare-fowl (*Alca impennis*), and the probability of its being an extinct species.

Amer. Jour. Sci. (2), xxxviii, p. 431.

Taken from Proc. Zool. Soc. Lond., July 9, 1864.

1864 B

Monograph of the fossil *Reptilia* of the Cretaceous formations; including supplement No. II, Cretaceous *Sauropterygia*. Supplement No. III, *Iguanodon*.

Palæontographical Society, xvi, pp. 1-21, pls. i-x.

Owen, Richard—Continued. 1864 C

On the *Archæopteryx* of Von Meyer, with a description of a long-tailed species from the lithographic stone of Solenhofen.

Philos. Trans. Roy. Soc. Lond., cliii, pp. 33-47, pls. i-iv.

1865 A

Monograph of the fossil *Reptilia* of the Liassic formations. Part I. *Sauropterygia*.

Palæontographical Society, xvii, pp. 1-40, pls. i-xvi.

1865 B

Observations on Recherches sur les Squalodons, par P. J. Van Beneden.

Geol. Magazine (1), ii, pp. 405-411.

A review of the above work of Van Beneden, which appeared in Memoirs Royal Acad. of Belgium, 1865.

1866 A

On the anatomy of vertebrates. I. Fishes and reptiles.

Pp. i-xlii, 1-650, woodcuts 452. London, 1866, -8vo.

1866 B

On the anatomy of vertebrates. II. Birds and mammals.

London, 1866, pp. i-viii, 1-592, with 406 figs. in the text and 3 tables. 8vo.

1866 C

Description of the skeleton of the great auk, or garfowl (*Alca impennis* L.).

Trans. Zool. Soc. Lond., v, pp. 317-335, with pls. li and lii.

1866 D

Description of part of the lower jaw and teeth of a small Oolitic mammal (*Stylodon pusillus* Ow.).

Geol. Magazine (1), iii, pp. 199-201, with pl. x, figs. 1, 2.

1867 A

On the mandible and mandibular teeth of Cochliodonts.

Geol. Magazine (1), iv, pp. 59-63, with pls. iii and iv.

1867 B

On the dental characters of genera and species, chiefly of fishes from the Lower Main seam and shales of coal, Northumberland.

Trans. Odontolog. Soc. Great Britain, v, pp. 323-376 with pls. i-xv.

Owen, Richard—Continued. 1868 A

On the anatomy of vertebrates. III. Mammals.

Pp. i-x, 1-915, text figs. 1-614, London, 1868. Vol. iii treats of the anatomy of the soft portions of the animal body and of the dentary and tegumentary systems. Chapter xi treats of the general conclusions reached.

1869 A

On fossil teeth of equines from Central and South America.

Proc. Roy. Soc. Lond., xvii, pp. 267-268. *Equus conversidens* described. *E. tau*, *E. curvidens*, and *E. arcidens* mentioned.

1870 A

Monograph of the fossil *Reptilia* of the Liassic formations. Part II. *Pterosauria*.

Palæontographical Society, xxiii, pp. 41-81, pls. xvii-xx.

1870 B

On fossil remains of equines from Central and South America referable to *Equus conversidens*, Ow., *Equus tau*, Ow., and *Equus arcidens*, Ow.

Philos. Trans. Roy. Soc. Lond., clix, 559-573, pls. lxi-lxii.

1870 C

On remains of a large extinct lama (*Palauchenia magna* Ow.), from Quaternary deposits in the valley of Mexico.

Philos. Trans. Roy. Soc. Lond., clx, pp. 65-77, pls. iv-vii.

1871 A

Monograph of the fossil *Mammalia* of the Mesozoic formations.

Palæontographical Society, xxiv, pp. 1-115, pls. i-iv.

1872 A

Monograph of the fossil *Reptilia* of the Wealden formation. Supplement No. IV. *Dinosauria* (*Iguanodon*).

Palæontographical Society, xxv, pp. 1-15, pls. i-iii.

1873 A

Description of the skull of a dentigerous bird (*Odontopteryx toliapicus*, Ow.) from the London clay of Sheppey.

Quart. Jour. Geol. Soc., xxix, pp. 511-522, with pls. xvi-xvii.

1874 A

Monograph on the fossil *Reptilia* of the Wealden and Purbeck formations. Supplement No. V. *Iguanodon*.

Palæontographical Society, xxvii, pp. 1-18, pls. i, ii.

Owen, Richard—Continued. 1874 B

Monograph on the fossil *Reptilia* of the Mesozoic formations. Part I. *Pterosauria* (*Pterodactylus*).

Palæontographical Society, xxvii, pp. 1-14, pls. i, ii.

1875 A

On fossil evidences of a sirenian mammal (*Eotherium ægypticum*, Owen) from the Nummilitic Eocene of the Mokattam Cliffs, near Cairo.

Quart. Jour. Geol. Soc., xxxi, pp. 100-105, with pl. iii.

1875 B

On *Prorastomus sirenoides* (Ow.). Part II.

Quart. Jour. Geol. Soc., xxxi, pp. 559-567, with pls. xxviii, xxix.

Reviewed in Geol. Magazine, (2) ii, pp. 422-423.

1875 C

Monograph of the fossil *Reptilia* of the Mesozoic formations. Part II. (Genera *Bothriospondylus*, *Cetiosaurus*, *Omosaurus*.)

Palæontographical Society, xxix, pp. 15-93, pls. iii-xxii.

1876 A

On the existence or not of horns in the *Dinocera*.

Amer. Jour. Sci. (3), xi, pp. 401-403.

1876 B

Evidences of Theriodonts in Permian deposits elsewhere than in South Africa.

Quart. Jour. Geol. Soc., xxxii, pp. 352-363, with 9 text figs.

Discusses *Bathygnathus borealis*.

1876 C

Monograph on the fossil *Reptilia* of the Wealden and Purbeck formations. Supplement No. VII. *Crocodylia* (*Poikilopleuron*), *Dinosauria* (*Chondrosteosaurus*).

Palæontographical Society, xxx, pp. 1-7, pls. i-vi.

1877 A

On the rank and affinities in the reptilian class of the *Mosasauridae*, Gervais.

Quart. Jour. Geol. Soc., xxxiii, pp. 682-715, with 24 figs. in the text.

1878 A

On the influence of the advent of a higher form of life in modifying the structure of an older and lower form.

Quart. Jour. Geol. Soc., xxxiv, pp. 421-430.

Owen, Richard—Continued. 1878 B
On the affinities of the *Mosasauridae*,
Gervais, as exemplified in the bony
structure of the fore fin.
Quart. Jour. Geol. Soc., xxxiv, pp. 748-753,
with 4 woodcuts in text.

1878 C
Monograph on the fossil *Reptilia* of
the Wealden and Purbeck formations.
Supplement No. VII. *Crocodylia* (*Goni-
opholis*, *Petrosuchus*, and *Suchosaurus*).
Palaeontographical Society, xxxii, pp. 1-15,
pls. i-vi.

1878 D
On the occurrence in North America
of rare extinct vertebrates found frag-
mentarily in England.
Ann. and Mag. Nat. Hist. (5), ii, pp. 201-223,
with pls. x, xi.

1879 A
Monograph of the fossil *Reptilia* of
the Wealden and Purbeck formations.
Supplement, No. IX. *Crocodylia* (*Goni-
opholis*, *Brachydictes*, *Nannosuchus*, *The-
riosuchus*, and *Nuthetes*).
Palaeontographical Society, xxxiii, pp. 1-19,
pls. i-iv.

1879 B
On the occurrence in North America
of rare extinct vertebrates found frag-
mentarily in England.
Ann. and Mag. Nat. Hist. (5), iv, pp. 53-61,
with pl. viii.
A continuation of paper designated Owen
R., 1878 D.

1880 A
On the occurrence in North America
of rare extinct vertebrates found frag-
mentarily in England.
Ann. and Mag. Nat. Hist. (5), v, pp. 177-181,
with pl. viii.
Conclusion of papers designated as Owen,
R., 1878 D and Owen R., 1879 B.

1881 A
A monograph of the fossil *Reptilia* of
the Liassic formations. Part III. *Ich-
thyopterygia*.
Palaeontographical Society, xxxv, pp. 83-134,
pls. xxi-xxxiii.

1881 B
On the order *Theriodontia*, with a
description of a new genus and species
(*Aluirosaurus felinus* Ow.).
Quart. Jour. Geol. Soc., xxxvii, pp. 261-265,
with pl. ix.

Owen, Richard—Continued. 1881 C
Description of parts of the skeleton
of an Anomodont reptile (*Platypodo-
saurus robustus* Owen). Part II. The
pelvis.
Quart. Jour. Geol. Soc., xxxvii, pp. 266-271,
with pl. x.
Contains remarks by Seely and Twelve-
trees.

1883 A
On generic characters in the order
Sauropterygia.
Quart. Jour. Geol. Soc., xxxix, pp. 133-138,
with 3 woodcuts in the text.

1883 B
On the skull of *Megalosaurus*.
Quart. Jour. Geol. Soc., xxxix, pp. 334-347,
with pl. xi and 1 cut in the text.

1884 A
On the skull and dentition of a Trias-
sic mammal (*Tritylodon longævis*) from
South Africa.
Quart. Jour. Geol. Soc., xl, pp. 146-152, with
pl. vi.

1886 A
American evidences of Eocene mam-
mals of the "plastic-clay" period.
Report Brit. Assoc. Adv. Sci., 55th meeting,
Aberdeen, 1885, p. 1033. Abstract.

1886 B
On a new perissodactyle ungulate
from Wyoming.
Geol. Magazine (3), iii, p. 140.
A reference to Woodward, H., 1886 B, con-
cerning *Phenacodus*.

1889 A
Monograph on the British fossil
Cetacea of the Red Crag.
Palaeontographical Society, pp. 1-40, with
pls. i-v and 14 text figs.
This paper deals especially with the genus
Ziphius, but a number of other genera are dis-
cussed, among them *Belemnophius*.

Packard, A. S. 1867 A
Observations on the glacial phe-
nomena of Labrador and Maine, with a
view of the recent invertebrate fauna of
Labrador.
Mem. Boston Soc. Nat. Hist., i, pp. 210-303,
with pls. vii, viii.

1868 A
The hairy mammoth.
Amer. Naturalist, ii, pp. 23-35, with 4 wood-
cuts in the text.

1886 A
Geological extinction and some of its
apparent causes.
Amer. Naturalist, xx, pp. 29-40.

- Palmer, T. S.** 1895 A
The earliest name for Steller's sea cow and dugong.
Science (2), ii, pp. 449-450.
The earliest generic name of the sea cow is *Hydrodamalis* Retzius; the earliest specific name is *gigas* Zimm.
- 1897 A
On the genera of rodents: An attempt to bring up to date the current arrangement of the order. By Oldfield Thomas, F. Z. S., Proc. Zool. Soc. London, 1896, pp. 1012-1028.
Science (2), vi, pp. 103-107.
A review of the paper whose title is quoted above.
- 1899 A
[Review of Dr. E. L. Trouessart's *Catalogus Mammalium*.]
Science (2), x, pp. 491-495.
Contains corrections of various generic names of mammals.
- Pander, Christ. H.** 1856 A
Monographie der fossilen Fische des silurischen Systems der russisch-baltischen Gouvernements.
Pp. 1-x, 1-91, with 9 pls. St. Petersburg, 1856.
- 1857 A
Ueber die Placodermen des devonischen Systems.
Pp. 1-106, with pls. 1-8, and B. St. Petersburg, 1857. 4°.
- 1858 A
Die Ctenodipterinen des devonischen Systems.
Pp. i-viii, 1-65, with pls. i-ix. 4°.
- 1860 A
Ueber die Saurodipteren, Dendrodipteren, Glyptolepiden, und Cheirolepiden des devonischen Systems.
Pp. i-ix, 1-90, with 17 pls. St. Petersburg, 1860.
- Pander, C. H., and d'Alton, Ed.** 1818 A
Riesenfaulthier (*Megatherium*).
Isis von Oken, 1818, cols. 1083-1086.
A letter addressed to Isis from Madrid.
- Panton, J. Hoyes.** 1891 A
The mastodon and mammoth in Ontario, Canada.
Geol. Magazine (3), viii, pp. 504-505.
- 1892 A
The mastodon and mammoth in Ontario, Canada.
Report Brit. Assoc. Adv. Sci., 61st meeting, Cardiff, 1891, pp. 654-655.
- Paquier, V.** 1894 A
Étude sur quelques cétacés du Miocène.
Mém. Soc. Géol. France. Paléontologie, iv, mém. No. 12, pp. 1-20, with pls. xvii-xviii.
- Parker, H. W.** 1884 A
[Abstract of an account of the finding of a mammoth in Grinnel, Iowa, by H. W. Parker; taken from *Daily Iowa Capital*.]
Science, iv, p. 46.
- 1885 A
Footprints in the rocks of Colorado.
Science, v, pp. 312-313, with 2 woodcuts.
- Parker, T. Jeffrey.** 1887 A
Notes on *Carcharodon rondeletti*.
Proc. Zool. Soc. Lond., 1887, pp. 27-40, with pls. iv-viii.
- 1890 A
On the presence of a sternum in *Notidanus indicus*.
Nature, xliii, p. 142, with 1 fig.
- 1895 A
On the cranial osteology, classification, and phylogeny of the *Dinornithidae*.
Trans. Zool. Soc. Lond., xiii, pp. 373-431, with pls. lvi-lxii.
- Parker, W. K.** 1864 A
On the sternal apparatus of birds and other *Vertebrata*.
Proc. Zool. Soc. Lond., 1864, pp. 339-341.
- 1866 A
On the structure and development of the skull in the ostrich tribe.
Philos. Trans. Roy. Soc. Lond., clvi, pp. 113-183, with pls. vii-xv.
- 1866 B
On the osteology of gallinaceous birds and tinamous.
Trans. Zool. Soc. Lond., v, pp. 149-241, with pls. xxxiv-xlii.
- 1868 A
A monograph on the structure and development of the shoulder girdle and sternum in the *Vertebrata*.
Published by the Ray Society, pp. i-xii, 1-237, with pls. i-xxx.
- 1870 A
On the structure and development of the skull of the common fowl.
Philos. Trans. Roy. Soc. Lond., clx, pp. 755-807; pls. lxxx-lxxxvii.

Parker, W. K.—Continued. 1871 A

On the structure and development of the skull of the common frog (*Rana temporaria*).

Philos. Trans. Roy. Soc. Lond., clxi, pp. 137-211, pls. iii-x.

1872 A

On the structure and development of the crow's skull.

Monthly Micros. Jour. Lond., viii, pp. 217-226, with pls. xxxiv-xxxvi.

1873 A

On the development of the skull in the tit and sparrow-hawk.

Monthly Micros. Jour. Lond., ix, pp. 6-11; 45-50, with pls. ii, v, vi.

1874 A

On the structure and development of the skull in the salmon (*Salmo salar* L.)

Philos. Trans. Roy. Soc. Lond., clxiii, pp. 95-145; pls. i-viii.

1874 B

On the structure and development of the skull in the pig (*Sus scrofa*).

Philos. Trans. Roy. Soc., clxiv, pp. 289-336, pls. xxviii-xxxvii.

An analysis of this memoir by E. Alix is found in Jour. de Zoologie, iv, 1875, pp. 62-69.

1875 A

Birds.

Encyclop. Brit., ed. 9, iii, pp. 699-728, woodcuts 1-37.

The remainder of the article on birds is from the pen of Alfred Newton. Parker deals with the osteology in particular.

1875 B

On ægithognathus birds. (Part I.)

Trans. Zool. Soc. Lond., ix, pp. 289-352, with pls. liv-lxii.

1876 A

On the structure and development of the bird's skull.

Trans. Linn. Soc. Lond. (2), i, pp. 99-154, with pls. xx-xxvii.

1877 A

On the structure and development of the skull in the *Batrachia*. Part. II.

Philos. Trans. Roy. Soc. Lond., clxvi, pp. 601-669, pls. liv-lxii.

1878 A

On the structure and development of the skull in the sharks and skates.

Trans. Zool. Soc. Lond., x, pp. 189-234, with pls. xxxiv-xlii.

1878 B

On the skull of the ægithognathous birds.

Trans. Zool. Soc. Lond., x, pp. 251-314, with pls. xlii-liv.

Parker, W. K.—Continued. 1879 A

On the structure and development of the skull in the common snake (*Tropidonotus natrix*).

Philos. Trans. Roy. Soc. Lond., clxix, pp. 385-417, pls. xxvii-xxxiii.

1879 B

On the evolution of the *Vertebrata*.

Nature, xx, pp. 30-32, 61-64, 81-83, with 4 figs. in the text.

1880 A

On the structure and development of the skull in the *Lacertilia*.

Philos. Trans. Roy. Soc. Lond., clxx, pp. 595-640, pls. xxxvii-xlv.

See also Proc. Roy. Soc. Lond., 1879, p. 214.

1881 A

On the structure and development of the skull in the *Batrachia*. Part III.

Philos. Trans. Roy. Soc. Lond., clxxii, pp. 1-266, pls. i-iv.

1882 A

On the development of the skull in *Lepidosteus osseus*.

Philos. Trans. Roy. Soc. Lond., clxxiii, pp. 443-491, pls. xxx-xxxviii.

1882 B

On the structure and development of the skull in sturgeons (*Acipenser ruthenus* and *A. sturio*).

Philos. Trans. Roy. Soc. Lond., clxxiii, pp. 139-185, pls. xii-xviii.

1882 C

On the structure and development of the skull in the urodeles.

Trans. Zool. Soc. Lond., xi, pp. 171-214, with pls. xxxvi-xli.

1882 D

On the morphology of the skull in the *Amphibia Urodela*.

Trans. Linn. Soc. Lond. (2), ii, pp. 165-212, with pls. xiv-xxi.

1883 A

On the structure and development of the skull in the *Crocodylia*.

Trans. Zool. Soc. Lond., xi, pp. 263-310, with pls. lxii-lxxi.

1884 A

On the presence of claws in the wings of birds.

The Ibis (5), vi, pp. 124-128, with 4 figs. in the text.

1885 A

On mammalian descent: The Hunterian lectures for 1884.

Pp. i-xii, 1-229, with addenda and illus.

- Parker, W. K.**—Continued. 1885 B
On the structure and development of the skull in the *Mammalia*. Part III. *Insectivora*.
Naturè, xxxi, pp. 377-379.
- 1886 A
On the structure and development of the skull in the *Mammalia*. Part II.
Philos. Trans. Roy. Soc., Lond., clxxvi, pp. 121-278, pls. xvi-xxxix.
- 1887 A
On the morphology of birds.
Nature, xxxv, pp. 331-332.
- 1889 A
On the structure and development of the wing of the common fowl.
Philos. Trans. Roy. Soc. Lond., clxxix, pp. 385-398, pls. lxii-lxv.
- 1889 B
On the "manus" of *Phœnicopterus*.
The Ibis (6), i, pp. 183-185, with 2 figs. in the text.
- 1891 A
On the morphology of a reptilian bird, *Opisthocornus cristatus*.
Trans. Zool. Soc. Lond., xiii, pp. 43-85, with pls. vii-x.
- 1891 B
On the morphology of the *Gallinaceæ*.
Trans. Linn. Soc. Lond., (2), v, pp. 213-244, with pls. xxii-xxv.
- Parsons, F. G.** 1899 A
The joints of mammals compared with those of man.
Jour. Anat. and Physiol., xxxiv, pp. 41-68, with 14 text figs.
- 1900 A
The joints of mammals compared with those of man. Part II. Joints of the hind limbs.
Jour. Anat. and Physiol., xxxiv, pp. 301-323, with 10 figs. in the text.
- Patten, William.** 1890 A
On the origin of vertebrates from arachnids.
Quart. Jour. Micros. Sci., xxxi, pp. 317-378, with pls. xxiii, xxiv, and 18 text figs.
- Paulli, Simon.** 1899 A
Ueber die Pneumaticität des Schädels bei den Säugethieren. I. Ueber den Bau des Siebbeins. Ueber die Morphologie des Siebbeins und die der Pneumaticität bei den Monotremen und den Marsupialiern.
Morpholog. Jahrbuch, xxviii, pp. 147-178, with pl. vii and 16 figs. in the text.
- Paulli, Simon**—Continued. 1900 A
Ueber die Pneumaticität des Schädels bei den Säugethieren. Eine Morphologische Studie. II. Ueber die Morphologie des Siebbeins und die der Pneumaticität bei den Ungulaten und Probosciden.
Morpholog. Jahrbuch, xxviii, pp. 179-251, with pls. viii-xiv, and 44 figs. in the text.
- 1900 B
Ueber die Pneumaticität des Schädels bei den Säugethieren. Eine Morphologische Studie. III. Ueber die Morphologie des Siebbeins und die der Pneumaticität bei den Insectivoren, Hyracoideen, Chiropteren, Carnivoren, Pinnepedien, Edentaten, Rodentien, Prosimiern, und Primaten, nebst einer zusammenfassenden Uebersicht über die Morphologie des Siebbeins und die der Pneumaticität des Schädels bei den Säugethieren.
Morpholog. Jahrbuch, xxviii, pp. 483-564, with pls. xxvii-xxix and 36 figs. in the text.
- Pavlow, A.** 1885 A
Notes sur l'histoire géologique des oiseaux.
Bull. Soc. Imp. Natur. Moscou, lx, pp. 100-123.
- Pavlow, Marie.** 1887 A
Études sur l'histoire paléontologique des ongulés en Amérique et en Europe. I. Groupe primitif de l'éocène inférieur.
Bull. Soc. Imp. Natur. Moscou (2), i, pp. 343-373, with pl. vii.
- 1888 A
Études sur l'histoire paléontologique des ongulés. II. Le développement des *Equidæ*. III. *Rhinocerotidæ* et *Tupiridæ*.
Bull. Soc. Imp. Natur. Moscou (2), ii, pp. 135-182, with 2 pls.
- For Professor Cope's review of this paper see Amer. Naturalist, xxii, p. 448; for that of M. Schlosser, Archiv f. Anthropol., xix, p. 159.
- 1890 A
Études sur l'histoire paléontologique des ongulés. IV. *Hipparion* de la Russie. V. Chevaux pleistocènes de la Russie.
Bull. Soc. Imp. Natur. Moscou (2), iii, pp. 653-716, with pls. vii-ix.
- 1892 A
Études sur l'histoire paléontologique des ongulés. VI. Les *Rhinocerotidæ* de

Pavlow, Marie—Continued.

la Russie et le developpement des *Rhinocerotidae* en général.

Bull. Soc. Imp. Natur. Moscou (2), vi, pp. 137-221, with pls. iii-v.

Appended is a list of 105 papers consulted by the authoress.

Reviewed by M. Schlosser in Archiv f. Anthropol., xxiii, pp. 138-139.

1892 B

Qu'est-ce que c'est que l'*Hipparion*?

Bull. Soc. Imp. Natur. Moscou (2), v, pp. 410-414.

1893 A

Note sur un nouveau crâne d'*Amygdodon*.

Bull. Soc. Imp. Natur. Moscou (2), vii, pp. 37-42, with pl. iii.

1894 A

Les mastodontes de la Russie et leurs rapports avec les mastodontes des autres pays.

Mém. Acad. Imp. Sci. St. Pétersbourg (8), i, No. 3, pp. 1-43, with pls. i-iii.

1900 A

Études sur l'histoire paléontologique des ongulés. VII. Artiodactyles anciens.

Bull. Soc. Imp. Natur. Moscou, for 1899, pp. 263-328, with pls. v, vi.

Citations made from reprint with pp. 1-62.

Peale, Rembrandt.

1802 A

A short account of the mammoth.

Tilloch's Philos. Magazine, London, xiv, pp. 162-169.

1802 B

On the differences which exist between the heads of the mammoth and elephant.

Tilloch's Philos. Magazine, London, xiv, pp. 228-229, with pl. v.

1803 A

Account of some remains of a species of gigantic oxen found in America and other parts of the world.

Philos. Magazine, xv, pp. 325-327, with pl. vi. Account of bones found at Bigbone-lick in Kentucky. The plate figures a portion of the skull and horn core of *Bison latifrons*.

1803 B

An historical disquisition on the mammoth, or great American incognitum, an extinct, immense, carnivorous animal whose remains have been found in North America.

8vo, pp. i-vi, 1-91, with 1 pl. London, 1803.

Pearce, J. Chaning.

1846 A

Notice of what appears to be the embryo of an *Ichthyosaurus* in the pelvic cavity of *Ichthyosaurus (communis?)*.

Ann. and Mag. Nat. Hist. (1), xvii, pp. 44-46.

Pédroni, P. M.

1844 A

Mémoire sur les poissons fossiles du département de la Gironde.

Actes Soc. Linn. de Bordeaux, xiii, pp. 277-298, with pls. i, ii.

Most of the drawings illustrating this paper are rude.

Perkins, H. C.

1842 A

Notice of fossil bones from Oregon, in a letter to Dr. C. T. Jackson.

Amer. Jour. Sci., xlii, pp. 136-140, with 4 figs.

This paper does not identify with certainty the bones described. May be *Megatherium*, *Myiodon*, or *Megalonyx*, or even something else. J. A. Allen refers them with doubt to *Bison antiquus* (Allen, J. A., 1876 B, p. 21.) Leidy (1869 A, p. 397) refers some of them to the mammoth.

1844 A

Note to the editors respecting fossil bones from Oregon.

Boston Jour. Nat. Hist., iv, pp. 134-136.

Gives description of a fossil humerus, which is named *Orycterotherium oregonensis*.

Perrin, A.

1895 A

Recherches sur les affinités zoologiques de l'*Hatteria punctata*.

Ann. Sci. Naturelles (7), Zool., xx, pp. 33-102.

The author deals principally with the muscular system, but devotes a few pages (39-46) to the skeleton.

1896 A

Constitution du carpe des anoures.

Bull. Scient. France et Belgique, xxvii, pp. 419-431, pl. xvi.

Peters, Karl.

1869 A

Zur Kenntniss der Wirbelthiere aus den Miocänschichten von Eibiswald in Steiermark. I. Die Schildkrötenreste.

Denkschr. k. Akad. Wissensch. Wien, math.-naturwiss. Cl., xxix, pp. 111-124, pls. i-iii.

1869 B

Zur Kenntniss der Wirbelthiere aus den Miocänschichten von Eibiswald in Steiermark. II. *Amphicyon*, *Viverra*, *Hyotherium*.

Denkschr. k. Akad. Wissensch. Wien, math.-naturwiss. Cl., xxix, pp. 189-214, with pls. i-iii.

1870 A

Zur Kenntniss der Wirbelthiere aus den Miocänschichten von Eibiswald in

Peters, Karl—Continued.

Steiermark. III. *Rhinoceros, Anchitherium*.

Denkschr. k. Akad. Wissensch. Wien, math.-naturw. Cl. xxx, pp. 29-49, with pls. i-iii.

1895 A

Ueber die Bedeutung des Atlas der Amphibien.

Anatom. Anzeiger, x, pp. 565-574.

Contains titles of 26 papers on the subject.

Peters, Wilhelm.

1839 A

Zur Osteologie der *Hydromedusa maximiliani*.

Archiv Anat. and Physiol., Jahrg. 1839, pp. 280-295, with pl. xiv, figs. 1-4.

1839 B

Ueber die Bildung des Schildkröten-skelet.

Archiv. Anat. and Physiol. u. Wissensch. Med., 1839, pp. 290-295, with pl. xiv, figs. 5-7.

1852 A

Ueber die Gebissformel der Spitzmäuse.

Archiv f. Naturgesch., xviii, i, pp. 220-277.

1864 A

Ueber das Milchgebiss des Walrosses, *Odobenus rosmarus*.

Monatsber. k. p. Akad. Wissensch. Berlin, 1864, pp. 685-687, with 1 pl.

Philippi, E.

1897 A

Ueber *Ischyodus suevicus* nov. sp. Ein Beitrag zur Kenntniss der fossilen Holocephalen.

Paläontographica, xlv, pp. 1-10, with pls. i, ii.

Contains description and figures of *Ischyodus suevicus*.

Pictet, F. J.

1853 A

Traité de paléontologie, ou histoire naturelle des animaux fossiles considérés dans leurs rapports zoologiques et géologiques.

Second edition, i, pp. i-xiv; 1-584, with atlas of 110 pls. 4°.

The first edition of the work was published in the year 1844.

1854 A

Traité de paléontologie, etc.

Second edition, ii, pp. 1-297. Only the pages of this volume which treat of *Vertebrata* are included here. These are devoted to the fishes.

Pictet, F. J., and Campiche, G.

1858 A

Description des fossiles du terrain crétacé des environs de Sante-Croix.

Materiaux pour la paléontologie suisse, ser. ii, art. 2, pp. 1-380, with pls. i-xliii.

Of this work pp. 29-99, inclusive, with pls. i-xii, are devoted to the vertebrates.

Pictet, F. J., Gaudin, C., and Harpe,
Ph. de la. 1857 A

Mémoire sur les animaux vertébrés trouvés dans le terrain sidérolitique du Canton de Vaud et appartenant à la faune éocène.

Genève, 1855-1857, pp. 1-120, with pls. i-xiv+1.

Pictet, F. J., and Humbert, Alois.

1856 A

Monographie des chéloniens de la molasse suisse.

Materiaux pour la paléontologie suisse, ser. i, art. 3, pp. 1-71, with pls. i-xxii.

On pp. 64-66 is found a list of the tortoises of the Swiss molasse.

1866 A

Nouvelles recherches sur les poissons fossiles du Mont Liban.

Genève, 1866, pp. i-vii; 1-115, with pls. i-xix.

Pictet, F. J., and Jaccard, Auguste.

1860 A

Description de quelques débris de reptiles et de poissons fossiles trouvés dans l'étage jurassique supérieur (virgalien) du Jura neuchâtelois.

Materiaux pour la paléontologie suisse, ser. iii, art. i, pp. 1-88, with pls. i-xix.

Plieninger, Th.

1852 A

Belodon plieningeri, H. v. Meyer. Ein Saurier der Keuperformation.

Jahreshefte Ver. f. vaterl. Naturk. Württemberg, viii, pp. 389-524, with pls. viii-xiii.

Plieninger, Felix.

1895 A

Campylognathus zitteli. Ein neuer Flugsaurier aus dem Lias Schwabens.

Paläontographica, xli, pp. 193-222, with pls. xix and 8 figs. in the text.

This paper contains a very full bibliography of the pterodactyls.

Plummer, John T.

1843 A

Suburban geology, or rocks, soil, and water about Richmond, Wayne County, Ind.

Amer. Jour. Sci. (1), xlv, pp. 281-313, with 14 figs. in the text.

Refers (p. 301) to the finding of a large tusk at Brookville, Ind., and of a mastodon's tooth near Jacksonburg, Ind.

See, also, Amer. Jour. Sci., xl, 1841, p. 149.

Pohlig, Hans.

1887 A

Ueber amerikanische Elephantenmolaren.

Verhandl. Naturf. Ver. preuss. Rheinlande, xlv, Sitzungsber., pp. 117-118.

Recognizes two N. A. species, *E. primigenius* and *E. trogontherii*. The latter, the author says, may be identical with *E. columbi*.

- Pohlig, Hans**—Continued. 1887 B
Die Spitze eines sehr jugendlichen permanenten Stosszahnes von *Elephas primigenius*.
Verhandl. Naturf. Ver. preuss. Rheinlande, xliv, Sitzungsber., p. 254.
- 1889 A
Dentition und Kranologie des *Elephas antiquus* Falc, mit Beiträgen über *Elephas primigenius* Blum. und *Elephas meridionalis* Nesti.
Nova Acta Akad. Cæs. Leop.-Car., liii, pp. 1-259, with pls. i-x and 110 figs. in the text.
Reviewed by M. Schlosser in Archiv f. Anthrop., xix, pp., 127-129.
- 1892 A
Die Cerviden des thüringischen Diluvial-Travertines, mit Beiträgen über andere diluviale und über recente Hirschformen.
Palæontographica, xxxix, pp. 215-264, with pls. xxiv-xxvii.
- 1892 B
Dentition und Kranologie des *Elephas antiquus* Falc, mit Beiträgen über *Elephas primigenius* Blum. und *Elephas meridionalis* Nesti. Zweiter Abschnitt.
Nova Acta Acad. Cæs. Leop.-Car., lvii, pp. 267-466, with pls. A-E and text figs. 108-152.
Review by M. Schlosser in Archiv f. Anthrop., xxii, pp. 96-97.
- 1893 A
Le premier crane complet du *Rhinoceros (Cænopus) occidentalis*, Leidy.
Bull. Soc. Belge Géol., Paléont., Hydrol., vii, Mém., pp. 41-44, with pl. iii.
- Pollard, E. C.** 1893 A
The succession of teeth in mammals.
Natural Science, ii, pp. 360-363.
- Pollard, H. B.** 1892 A
On the anatomy and phylogenetic position of *Polypterus*. ✓
Zool. Jahrbücher, v, pp. 387-428, with pls. xxvii-xxx and 10 figs. in the text.
- 1894 A
The cirrhostomial origin of the head in vertebrates.
Anatom. Anzeiger, ix, pp. 349-359, with 4 figs. in the text.
Discusses the derivation of the Siluroids from *Amphioxus*, *Myrine*, etc.
- 1894 B
The suspension of the jaws in fish.
Anatom. Anzeiger, x, pp. 17-25, with 5 figs.
- Pollard, H. B.**—Continued. 1895 A
The oral cirri of Siluroids and the origin of the head in vertebrates.
Zool. Jahrbücher; Abth. f. Anat., viii, pp. 379-424, pls. xxiv, xxv.
- Pomel, A.** 1847 A
Note critique sur les caractères et les limites du genre *Palæotherium*.
Arch. Sci. Phys. et Nat., Geneva, v, pp. 200-207.
- 1847 B
Sur un nouveau genre de pachydermes fossiles (*Elothierium*) voisin des Hippopotames.
Arch. Sci. Phys. et Nat. Geneva, v, pp. 307-308.
- 1847 C
Note sur des animaux fossiles découverts dans le département de l'Allier.
Bull. Soc. Géol. France (2), iv, pp. 378-385, with pl. iv.
- 1848 A
Observations paléontologiques sur les hippopotames et les cochons.
Arch. Sci. Phys. et Nat., Geneva, viii, pp. 155-162.
Treats of the species of *Hippopotamus* and of *Sus* then known.
- 1848 B
Note sur le genre *Hyopotamus* Owen et sur les Anchithériums en général.
Arch. Sci. Phys. et Nat., Geneva, viii, pp. 321-326.
- 1848 C
Étude sur les carnassiers insectivores. I. Insectivores fossiles. II. Classification des insectivores.
Arch. Sci. Phys. et Nat., Genève, ix, pp. 159-165; 244-251.
- 1848 D
Description de la tête du *Castoroides ohioensis* Foster.
Arch. Sci. Phys. et Nat., Geneva, ix, pp. 165-167.
A review of Wyman, J., 1846 B.
- 1853 A
Catalogue méthodique et descriptif des vertébrés fossiles découverts dans le bassin hydrographique supérieur de la Loire, et surtout dans la vallée de son affluent principal, l'Allier.
8 vo. Paris, 1853, pp. 1-193.
- Portis, Alessandro.** 1878 A
Ueber fossile Schildkröten aus dem Kimmeridge von Hannover.
Palæontographica, xxv, pp. 125-140, with pls. xv-xviii.

- Portis, Alessandro**—Continued. 1882 A
Les chéloniens de la Molasse Vau-
doise conservés dans le Musée Géolo-
gique de Lausanne.
Abhandl. schweizer. paläontolog. Gesellsch.,
ix, pp. 1-78, pls. i-xxix.
Contains 59 titles of papers consulted.
- Fouchet, Georges.** 1866 A
Contribution à l'anatomie des Éden-
tés.
Jour. l'Anat. et Physiol., iii, pp. 113-129, 337-
353, with pls. iii, iv, ix, x.
See vol. iv, pp. 35-37, for a letter from Rich-
ard Owen to Fouchet on the above memoir.
- Pouchet, G., and Beauregard, H.**
1889 A
Recherches sur le cachalot.
Nouv. Arch. du Mus. d'Hist. Nat., Paris (3),
i, pp. 1-96, with pls. i-viii.
This portion of the authors' researches is
devoted to the osteology of *Physeter macroceph-
alus*.
- Powrie, James.** 1861 A
Cephalaspides of Forfarshire.
The Geologist, iv, pp. 137-180, with wood-
cut.
- 1864 A
The Scottish *Pteraspis*.
The Geologist, vii, pp. 170-172.
- 1864 B
On the fossiliferous rocks of Forfar-
shire and their contents.
Quart. Jour. Geol. Soc., xx, pp. 413-429, with
pl. xx.
Contains remarks on *Acanthodidae* and *Ce-
phalaspidae*. New genus *Euthacanthus* (= *Clit-
matius*) is established.
- 1867 A
On the genus *Cheirolepis*, from the
Old Red sandstone.
Geol. Magazine (1), iv, pp. 147-152, with
2 figs. in the text.
- Powrie, James, and Lankester, E. Ray.**
1868 A
A monograph of the fishes of the
Old Red sandstone of Britain. Part I.
The *Cephalaspidae*, by E. R. Lankester.
Palaeontographical Society, xxi, pp. 1-33, pl.
i-v, text figs. 1-12.
- 1870 A
A monograph of the fishes of the Old
Red sandstone of Britain. Part I (con-
cluded). The *Cephalaspidae*.
Palaeontographical Society, xxiii, pp. 1-62,
pls. vi-xiv, text figs. 12-33.
- Preble, Edward A.** 1899 A
Revision of the jumping mice of the
genus *Zapus*.
N. A. Fauna, No. 15 (U. S. Dept. Agricult.),
pp. 1-42, with pl. i.
- Preyer, William.** 1862 A
Ueber *Plautus impennis* Brunn.
Jour. für Ornithologie, x, pp. 110-124, 337-356.
- Priem, F.** 1896 A
Sur des dents de poissons du Crétacé
supérieur de France.
Bull. Soc. Géol. France (3), xxiv, pp. 288-295,
with pl. ix.
- 1897 A
Sur des dents d'Elasmobranches de
divers gisements sénoniens (Villedieu,
Meudon, Folx-les-caves).
Bull. Soc. Géol. France (3), xxv, pp. 40-56,
with pl. i.
- 1898 A
Sur des pycnodontes et des squales
du Crétacé supérieur du bassin de Paris
(Turonien, Sénonien, Montien infé-
rieur).
Bull. Soc. Géol. France (3), xxvi, pp. 229-
243, with pl. ii.
Describes new species *Caelodus attenuatus*, and
gives figs. of *Corax pristodontus* and *Scapanor-
hynchus?* (*Odontaspis*) *subulatus*.
- Prime, A. J.** 1845 A
Great American mastodon.
Amer. Quart. Jour. Agricult. and Sci., ii,
pp. 203-212, with pl. iv.
- Probst, J.** 1858 A
Ueber das Gebiss des *Notidanus*
primigenius Ag.
Jahreshefte Ver. f. vaterl. Naturk. Württem-
berg, xiv, pp. 124-127, with 10 figs. in the text.
- 1859 A
Ueber die Streifung der fossilen
Squalidenzähne.
Jahreshefte Ver. f. vaterl. Naturk. Württem-
berg, xv, pp. 100-102.
- 1878 A
Berträge zur Kenntniss der fossilen
Fische aus der Molasse von Baltringen.
Jahreshefte Ver. f. vaterl. Naturk. Württem-
berg, xxxiv, pp. 112-154, with pl. i.
- 1879 A
Berträge zur Kenntniss der fossilen
Fische aus der Molasse von Baltringen.
Jahreshefte Ver. f. vaterl. Naturk. Württem-
berg, xxxv, pp. 127-191, with pls. ii, iii.
This paper is devoted to descriptions of the
teeth of sharks.
- 1885 A
Ueber fossile Reste von *Squalodon*.
Beitrag zur Kenntniss der fossilen Reste
der Meeressäugetierte aus der Molasse
von Baltringen.
Jahreshefte Ver. vaterl. f. Naturk. Württem-
berg, xli, pp. 49-67, with pl. i.

- Probst, J.**—Continued. 1886 A
 Ueber die fossilen Reste von Zahn-
 walen (Cetodonten) aus der Molasse
 von Baltringen.
 Jahreshefte Ver. vaterl. f. Naturk. Württem-
 berg, xlii, pp. 102-145, with pl. iii.
- Prout, H. A.** 1846 A
 Gigantic *Palæotherium*.
 Amer. Jour. Sci. (2), ii, pp. 288-289, with 1 fig.
 in the text.
- 1847 A
 Description of a fossil maxillary bone
 of a *Palæotherium* from near White
 River.
 Amer. Jour. Sci. (2), iii, pp. 248-250, with 2
 figs. in the text.
- 1860 A
 [Remarks of Dr. Prout on a fossil
 tooth found at King's salt works, near
 Abingdon, Va.]
 Trans. Acad. Sci. St. Louis, i, pp. 699-700.
 On this tooth the genus *Leidyotherium* was
 proposed without any specific name. It ap-
 pears to be quite probable that there was an
 error regarding the locality.
- Putnam, F. W.** 1884 A
 Man and the mastodon.
 Science, iv, p. 112.
 Refers to Plummer, J. T., 1843 A.
- 1885 A
 Man and the mastodon.
 Science, vi, pp. 375-376.
- Pycraft, W. P.** 1894 A
 The wing of *Archæopteryx*. Part I.
 Natural Science, v, pp. 350-360, with pls.
 i-iii.
- 1896 A
 The wing of *Archæopteryx*.
 Natural Science, viii, pp. 261-266, with 3 figs.
 in the text.
- 1898 A
 Contributions to the osteology of
 birds. Part I. *Steganopodes*.
 Proc. Zool. Soc. Lond., 1898, pp. 82-101, with
 pls. vii, viii, and 8 figs. in the text.
- 1899 A
 Contributions to the osteology of
 birds. Part III. *Tubinares*.
 Proc. Zool. Soc. Lond., 1899, pp. 381-411, with
 pls. xxii, xxiii, and 2 text figs.
- Quart. Jour. Geol. Sci.** 1845 A
 Notice of a mastodon recently dis-
 covered in North America.
 Quart. Jour. Geol. Soc., i, pp. 566-567.
 An extract "from an American paper," re-
 ferring to the Newburgh, N. Y., mastodon.
- Quenstedt, Fr. Aug.** 1847 A
 Ueber *Lepidotus* im Lias E. Württem-
 bergs.
 Pp. 1-24, with pls. i, ii. Tübingen, 1847.
 Description of *Lepidotus elvensis*, Blv.
- 1850 A
 Ueber *Hippotherium* der Bohnenerze.
 Jahreshefte Ver. f. vaterl. Naturk. Württem-
 berg, vi, pp. 164-185, with pl. i.
 This volume, it is stated on the title-page,
 was not issued until 1854.
- 1850 B
 Die Mastodontosaurier im grünen Keu-
 persandsteine Württemberg's sind Ba-
 trachier.
 Pp. 1-34, with pls. i-iv, Tübingen, 1850.
- 1852 A
 Handbuch der Petrefactenkunde.
 Pp. 1-792, with 62 pls. Tübingen, 1852.
 Pp. 1-258, with pls. 1-19, are devoted to the
Vertebrata. A second edition of this work was
 published in 1866. A third edition of 1,239
 pages and 100 pls. appeared in 1885.
- 1858 A
 Ueber *Pterodactylus liasicus*.
 Jahreshefte Ver. f. vaterl. Naturk. Württem-
 berg, xiv, pp. 299-310, with pl. ii, fig. 1.
- 1885 A
 Handbuch der Petrefactenkunde.
 Dritte umgearbeitete und vermehrte
 Auflage.
 Tübingen, 1885, pp. i-viii, 1-1239, with an
 atlas of 100 pls. and explanations and 443 figs.
 in the text.
 Of this work pp. 19-392 are devoted to the
Vertebrata.
- 1889 A
Psammochelys keuperina.
 Jahreshefte Ver. f. vaterl. Naturk. Württem-
 berg, xlv, pp. 120-130, with pls. i, ii.
- Rapp, Wilhelm.** 1852 A
 Anatomische Untersuchungen über
 die Edentaten. Mit 10 Steindruckta-
 feln. 2te Auflage.
 Pp. 1-108. Tübingen, 1852.
 Treats of the anatomy, including the osteol-
 ogy, of the living *Edentata*.
- Rathke, Heinrich.** 1853 A
 Ueber den Bau und die Entwicklung
 des Brustbeins der Saurier.
 Pp. 1-26, Königsberg, 1853.
 A translation of this work will be found
 in Parker, W. K., 1868 A.
- Redfield, John Howard.** 1837 A
 Fossil fishes of Connecticut and Mas-
 sachusetts, with a notice of an unde-
 scribed genus.
 Annals Lyc. Nat. Hist. N. Y., iv, pp. 35-40.

- Redfield, W. C.** 1838 A
Newly discovered ichnolites.
Amer. Jour. Sci., xxxiii, pp. 201-202.
- 1838 B
Fossil fishes in Virginia.
Amer. Jour. Sci., xxxiv, p. 201.
- 1839 A
Fossil fishes of the Red sandstone.
Amer. Jour. Sci., xxxvi, pp. 186-187.
Mentions only *Catopterus gracilis* and *Palæoniscus*, species not determined.
- 1841 A
Short notices of American fossil fishes.
Amer. Jour. Sci. (1), xli, pp. 24-28.
- 1843 A
Notice of newly discovered fish beds and a fossil footmark in the Red sandstone formation of New Jersey.
Amer. Jour. Sci. (1), xliv, pp. 134-136, with 1 fig. in text.
- 1850 A
On some fossil remains from Broome County, N. Y.
Proc. Amer. Assoc. Adv. Sci., 2d meeting, Cambridge, Mass., pp. 255-256.
Vulpes obtained from clay beneath drift.
- 1853 A
On the geological age and affinities of the fossil fishes which belong to the sandstone formation of Connecticut, New Jersey, and the coal field near Richmond, in Virginia.
Annals of Science (Cleveland, Ohio), i, pp. 270-271.
Abstract of communication made to the Amer. Assoc. Adv. Sci.
- 1856 A
On the relations of the fossil fishes of the sandstone of the Connecticut and other Atlantic States to the Liassic and Oolitic periods.
Amer. Jour. Sci. (2), xxii, pp. 357-363.
- 1857 A
On the relations of the fossil fishes of the sandstone of Connecticut and other Atlantic States to the Liassic and Jurassic periods.
Proc. Amer. Assoc. Adv. Sci., 10th meeting, Albany, 1856, pp. 180-188.
- Reh, L.** 1894 A
Die Gliedmassen der Robben.
Jenaische Zeitschr. Naturwiss., xxviii (xxi), pp. 1-44, with pl. i.
Appended is a list of papers, 36 in number, which bear on the subject discussed.
- Reh, L.—Continued.** 1895 A
Die Schuppen der Säugetiere.
Jenaische Zeitschr. Naturwiss., xxix (xxii), pp. 157-220, with pl. i.
Appended is a list of papers bearing on the subject, 90 in number.
- Reichenow, Anton.** 1871 A
Die Fussbildungen der Vögel.
Jour. für Ornithologie, xix, pp. 401-458, with pl. vi.
- Reichert, C. B.** 1865 A
Ueber ein Schädel-fragment des *Glyptodon*.
Archiv Anat. Physiol. u. wissenschaft. Med., 1865, p. 336.
- Reinhardt, J.** 1866 A
Ueber den Hautpanzer der megatheroïden Thiere.
Archiv Anat. Physiol. u. wissenschaft. Med., 1866, pp. 414-415.
- 1874 A
Sur les anomalies des vertèbres sacrées chez les crocodiliens.
Jour. de Zoologie, lii, pp. 308-312.
- 1875 A
De i Brasiliens Knoglehuler fundne Glyplodont-Levninger og en ny, til de gravigrade Edentater hørende Slægt.
Vidensk. Meddel. naturh. Forening Kjöbenhavn, 1875, pp. 165-236, with pl. iv.
- 1879 A
Beskrivelse af Hovedskallen af et Kæmpedovendyr, *Grypotherium darwini*, fra La Plata-Landenes plejstocene Dannelser.
Danske Vidensk. Selskab. Skr. (5), xii, pp. 353-374, with pls. i, ii, and résumé in French, pp. 375-379.
- 1880 A
De i brasilianske Knoglehuler fundne Navlesvin-Arter.
Vidensk. Meddel. naturh. Forening, Kjöbenhavn, 1880, pp. 3-33, with pl. vii.
Describes as new *Dicotyles stenocephalus* and compares it with North American species.
- Reis, Otto M.** 1888 A
Die Coelacanthinen, mit besonderer Berücksichtigung der im Weissen Jura Bayerns vorkommenden Gattungen.
Palæontographica, xxxv, pp. 1-96, with pls. i-v.
- 1892 A
Ueber die Zurechnung der Acanthodier zu den Selachiern.
Sitzungsber. Gesellsch. naturf. Freunde Berlin, 1892, pp. 153-156.
Followed by remarks in reply by Dr. Otto Jaekel.

- Reis, Otto M.**—Continued. 1895 A
On the structure of the frontal spine and the rostro-labial cartilages of *Squaloraja* and *Chimæra*.
Geol. Magazine (4), ii, pp. 385-391, pl. xii.
- 1895 B
Illustrationen zur Kenntniss des Skelets von *Acanthodes bronni* Agassiz.
Abhandl. senckenb. naturforsch. Gesellsch., xix, pp. 49-64, with pls. i-vi.
- 1895 C
Palæontologische Beiträge zur Stammesgeschichte der Teleostier.
Neues Jahrb. Mineral., 1895, i, Abhandl., pp. 162-182.
- 1896 A
Ueber *Acanthodes bronni* Agassiz.
Schwalbe's Morpholog. Arbeiten, vi, pp. 143-220, pls. vi, vii, and 2 figs. in the text.
For review of this paper see A. Tornquist, in Zoolog. Centralbl., i, pp. 649-656.
- 1897 A
Das Skelet der Pleuracanthiden und ihre systematischen Beziehungen.
Abhandl. senckenb. naturforsch. Gesellsch., xx, pp. 57-155, with pl. i.
Reviewed by Tornquist, Zoolog. Centralbl., v, 1898, pp. 472-474.
- Reissner, E.** 1859 A
Ueber die Schuppen von *Polyphterus* und *Lepidosteus*.
Archiv. Anat. Physiol. u. wissenschaft. Med., 1859, pp. 259-268, with pl. v, A.
- Renevier, E.** 1879 A
Les *Anthracotheurium* de Rochette.
Bull. Soc. Vaudoise, Sci. Nat. (2), xvi, pp. 140-148, with pls. iv-viii.
- Reuss, August Em.** 1846 A
Die Versteinerungen der böhmischen Kreideformation. Abth. I.
Pp. i-iv, 1-58, with i-xiii, Stuttgart. 4to.
Of this "Abtheilung" only pp. 1-13 are devoted to the *Vertebrata*, and these are all fishes.
- Rhoads, Samuel N.** 1894 A
A contribution to the life history of the Allegheny cave rat, *Neotoma magister*.
Proc. Acad. Nat. Sci. Phila., 1894, pp. 213-221.
- 1895 A
Distribution of the American bison in Pennsylvania, with remarks on a new fossil species.
Proc. Acad. Nat. Sci. Phila., 1895, pp. 244-248.
Describes new species, *B. appalachicolus*.
- Rhoads, Samuel N.**—Cont'd. 1897 A
Notes on living and extinct species of North American *Bovidæ*.
Proc. Acad. Nat. Sci. Phila., 1897, pp. 483-502, with pls. xii.
- 1898 A
Notes on the fossil walrus of North America.
Proc. Acad. Nat. Sci. Phila., 1898, pp. 196-201.
- Rice, Franklin P.** 1885 A
An account of the discovery of a mastodon's remains in Northborough, Worcester County, Mass.
Worcester, Mass., 1885. Pp. 3-8, with 1 pl.
- Richardson, John.** 1854 A
The zoology of the voyage of H. M. S. *Herald*. Vertebrates, including fossil mammals.
Pp. 172; pls. i-xxxiii. London, 1854.
- 1854 B
Extract from the "Zoology of the *Herald*" on the mastodon found in the Swan River region.
Proc. Boston Soc. Nat. Hist., v, pp. 82-84.
- 1855 A
Note on the *Mastodon* (?) and the *Elephas primigenius*.
Amer. Jour. Sci. (2), xix, pp. 131-132.
- Ridewood, W. G.** 1895 A
The teeth of the horse.
Natural Science, vi, pp. 249-258, with figs.
Describes and illustrates the dentition of the horse from six months before birth to old age.
- Riese, Heinrich.** 1892 A
Beitrag zur Anatomie des *Tylotriton verrucosus*.
Zool. Jahrbücher Abth. Anat. und Ontog., pp. 99-154, with pl. 9-11.
- Riggs, Elmer S.** 1896 A
Hoplophoneus occidentalis.
Kansas Univ. Quarterly, v, pp. 37-52, with pl. i.
- 1896 B
A new species of *Dinictis* from the White River Miocene of Wyoming.
Kansas Univ. Quarterly, iv, pp. 237-241, with 1 fig. in the text. Describes *D. paucidens*, sp. nov.
- 1898 A
On the skull of *Amphictis*.
Amer. Jour. Sci. (4), v, pp. 257-259, with 2 figs. in the text.
- 1899 A
The *Mylagaulidæ*: an extinct family of sciuriform rodents.
Pubs. Field Columb. Mus., Geol., i, pp. 182-187, with text figs.

- Riggs, Elmer S.**—Continued. 1900 A
Fossil hunting in Wyoming.
Science (2), xi, pp. 233-234.
Mentions Prof. F. A. Lucas's identification of *Labrosaurus* with *Antrodemus*.
- Riley, Henry, and Stutchbury, Samuel.** 1838 A
A description of various fossil remains of three distinct saurian animals recently discovered in the Magnesian Conglomerate near Bristol.
Trans. Geol. Soc. Lond. (2), v, pp. 349-357, with pls. xxix, xxx.
A brief abstract is given in Neues Jahrb. Mineral., 1841, pp. 607-609.
- Ringueberg, Eug. N. S.** 1884 A
A new *Dinichthys* from the Portage Group of western New York.
Amer. Jour. Sci. (3), xxvii, pp. 476-478, with 2 figs. in the text.
Describes *D. minor*, not *D. minor* of Newberry; later called *D. ringuebergi* by Newberry.
- Roberts, G. E.** 1864 A
On some remains of *Bothriolepis*.
Report Brit. Assoc. Adv. Sci., 33d meeting, Newcastle-on-Tyne, 1863, p. 87.
- Rochebrune, A. J.** 1880 A
Revision des ophidiens fossiles du Muséum d'Histoire Naturelle
Nouv. Arch. du Mus. d'Hist. Na. Paris (2), iii, pp. 271-296.
- 1881 A
Mémoire sur les vertèbres des ophidiens.
Jour. l'Anat. et Physiol., xvii, pp. 185-229, with pls. xiv, xv, and 18 figs. in the text.
- Roemer, Ferdinand.** 1849 A
Texas: Mit besonderer Rücksicht auf deutsche Auswanderung und die physischen Verhältnisse des Landes. Mit einem naturwissenschaftlichen Anhang und einer topographisch-geognostischen Karte von Texas.
Pp. i-xv, 1-464, Bonn, 1849.
On pp. 419-420 are found descriptions of *Lamna texana*, and the genus *Ancistrodon* Debey. *Otodus appendiculatus*, *Oxyrhina mantelli* and *Corax heterodon* are mentioned.
- 1852 A
Die Kreidebildungen von Texas und ihre organischen Einschlüsse. Mit einem die Beschreibung von Versteinierungen aus paläozoischen und tertiären Schichten enthaltenden Anhang und mit 11 von C. Hohe nach der Natur auf Stein gezeichneten Tafeln.
Pp. i-vii, 1-100, Bonn, 1852.
- Roemer, Ferdinand**—Cont'd. 1856 A
Palæoteuthis, eine Gattung nackter Cephalopoden in devonischen Schichten der Eifel.
Palæontographica, iv, pp. 72-74, with pl. xiii.
Describes *Palæoteuthis dunensis*.
- 1857 A
Ueber Fisch- und Pflanzen-führende Mergelschiefer des Rothliegenden bei Klein-Weundorf unweit Löwenberg, und im Besonderen über *Acanthodes gracilis*, den am häufigsten in denselben vorkommenden Fisch.
Zeitschr. deutsch. geol. Gesellsch., ix, pp. 51-84, with pl. iii.
- 1865 A
Ueber das Vorkommen von *Rhizodus hibberti* Owen (*Megalichthys hibberti* Agassiz et Hibbert) in den Schieferthonen des Steinkohlengebirges von Volpersdorf in der Grafschaft Glatz.
Zeitschr. deutsch. geol. Gesellsch., xvii, pp. 272-276, with pl. vi.
The species here called *Rhizodus hibberti* is renamed *Rhizodopsis robusta* by A. S. Woodward.
- 1890 A
Zur Frage nach dem Ursprunge der Schuppen der Säugetiere.
Anatom. Anzeiger, viii, pp. 526-532.
- 1892 A
Ueber den Bau und die Entwicklung des Panzers der Gürteltiere.
Jenaische Zeitschr. Naturwiss., xxvii (xx), pp. 513-556, with pls. xxiv and xxv.
- Röse, C.** 1892 A
Zur Phylogenie des Säugetiergebisses.
Biolog. Centralbl., xii, pp. 624-638.
Abstract by M. Schlosser in Archiv f. Anthrop., xxiii, p. 153.
- 1892 B
Ueber Zahnbau und Zahnwechsel der Dipnoer.
Anatom. Anzeiger, vii, pp. 821-839, with 10 figs. in the text.
- 1892 C
Ueber die Zahnentwicklung der Krokodile.
Verhandl. Anat. Gesellsch., 6th meeting, Vienna, 1892, pp. 225-226.
- 1892 D
Beiträge zur Zahnentwicklung der Edentaten.
Anatom. Anzeiger, vii, pp. 495-512, with 14 text figs.

- Röse, C.**—Continued. 1892 E
 Ueber die Zahnentwicklung der Beuteltiere.
 Anatom. Anzeiger, vii, pp. 639-650; 693-707, with 23 text figs.
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- 1893 A
 Ueber den Zahnbau und Zahnwechsel von *Elephas indicus*.
 Schwalbe's Morpholog. Arbeiten, iii, pp. 173-194, pl. x and 2 text figs.
 Abstract of, by M. Schlosser, in Archiv f. Anthrop., xxiv, pp. 137-138.
 Contains citations of the literature of the subject.
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- 1893 B
 Ueber die Zahnentwicklung der *Crocodylia*.
 Schwalbe's Morpholog. Arbeiten, iii, pp. 195-228, with 45 figs. in the text.
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- 1893 C
 Ueber die Deutung des Milchgebisses der Säugethiere.
 Verhandl. deutsch. odontolog. Gesellsch., iv, pp. 308-310, with 1 text fig.
 Preceded by a paper on same subject by Dr. M. Schlosser.
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- 1894 A
 Ueber die Zahnentwicklung von *Chlamydoselachus anguineus* Garman.
 Schwalbe's Morpholog. Arbeiten, iv, pp. 193-206, with 12 figs. in the text.
-
- 1894 B
 Ueber die Zahnentwicklung der Fische.
 Anatom. Anzeiger, ix, pp. 653-662, with 8 figs. in the text.
-
- 1895 A
 Das Zahnsystem der Wirbelthiere.
 Merkel and Bonnet's Anat. Hefte, Ergebnisse, iv, 1894, pp. 542-591.
 List of 248 titles of papers bearing on the subject.
 Reviewed by M. Schlosser in Archiv f. Anthrop., xxv, pp. 193-195.
-
- 1897 A
 Ueber die verschiedenen Abänderungen der Hartgewebe bei niederen Wirbeltieren.
 Anatom. Anzeiger, xiv, pp. 33-69, with 28 figs. in the text.
-
- Röse, C., and Bartels, O.** 1896 A
 Ueber die Zahnentwicklung des Rindes.
 Schwalbe's Morpholog. Arbeiten, vi, pp. 49-118, with 39 figs. in the text.
 Reviewed by M. Schlosser in Archiv f. Anthrop., xxv, pp. 234-235.
-
- Roger, Otto.** 1887 A
 Ueber die Hirsche.
 Correspondenzblatt Vereins Regensb., 1887, Sept., p. 43, with 2 pls.
-
- 1889 A
 Ueber die Umbildungen des Säugethierskeletes und die Entwicklungsgeschichte der Pferde.
 Abhandl. Vereins Regensb., 1889, p. 35.
 Reviewed by M. Schlosser in Archiv f. Anthrop., xx, pp. 152-154.
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- 1896 A
 Verzeichniss der bisher bekannten fossilen Säugethiere. Neu zusammengestellt von Dr. Otto Roger, kgl. Regierungs- und Kreis-Medizinrath in Augsburg.
 Bericht naturwiss. Vereins f. Schwaben und Neuburg (a. V.), xxxii, pp. 1-272.
 This is a systematic list of described fossil vertebrates, with references to places of publication of descriptions.
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- Rogers, Henry D.** 1842 A
 Report on the *Ornithichnites*, or footmarks of extinct birds in the New Red sandstone of Massachusetts and Connecticut, observed and described by Prof. Hitchcock, of Amherst. Signed by H. D. Rogers, Lardner Vanuxum, Richard C. Taylor, Ebenezer Emmons, T. A. Conrad.
 Ann. Nat. Hist., viii, pp. 235-238.
-
- 1845 A
 Remarks upon the bones of *Zeuglodon*.
 Proc. Boston Soc. Nat. Hist., ii, p. 79.
-
- 1851 A
 On the position and characters of the reptilian footprints in the Carboniferous red-shale formation of eastern Pennsylvania.
 Proc. Amer. Assoc. Adv. Sci., 4th meeting, New Haven, 1850, pp. 250-251.
-
- 1854 A
 Communication on the epoch of the mammoth.
 Proc. Boston Soc. Nat. Hist., v, pp. 22-23.
-
- 1855 A
 Remarks on fossil footprints found in Carboniferous sandstones of Pennsylvania.
 Proc. Boston Soc. Nat. Hist., v, pp. 182-186.
-
- 1865 A
 On a peculiar fossil found in the Mesozoic sandstone of the Connecticut

Rogers, Henry D.—Continued.

valley, discovered by Prof. W. B. Rogers.

Report Brit. Assoc. Adv. Sci., 34th meeting, Bath, 1864, p. 66.

Zoological position of fossil not determined.

Rohon, J. Victor.

1889 A

Ueber fossile Fische.

Mém. Acad. Imp. Sci., St. Pétersbourg (7), xxxvi, No. 73, pp. 1-17; pls. i, ii.

Contains remarks on the structure of the teeth of *Acanthodes* and *Palæoniscus*, with illustrations.

1889 B

Die Dendrodonten des devonischen Systems in Russland. Palæontologische und vergleichend-anatomische Studie.

Mém. Acad. Imp. Sci., St. Pétersbourg (7), xxxvi, No. 14, pp. 1-52, with pls. i, ii and 1 text fig. giving a restoration of *Dendrodus*.

1891 A

Ueber *Pterichthys*.

Verhandl. russ.-kais. mineralog. Gesellsch. St. Petersburg (2), xxviii, pp. 292-315, with pl. vii.

1892 A

Ueber devonische Fische vom oberen Jenissei nebst Bemerkungen über die Wirbelsäule devonischer Ganoiden.

Mélanges géol. et paléont. Acad. Imp. Sci. St. Pétersbourg, vol. i, pp. 17-34, with 1 pl.

This paper was published earlier in Bull. Acad. St. Pétersbourg (2), i, 1890, pp. 393-410.

1892 B

Holoptychius-Schuppen in Russland.

Mélanges géol. et paléont. Acad. Imp. Sci. St. Pétersbourg, i, pp. 35-56, with 1 pl.

1892 C

Die obersilurische Fische von Oesel.

I Theil, *Thyestidae* und *Tremataspidae*.

Mém. Acad. Imp. Sci. St. Pétersbourg (7), xxxviii, No. 13, pp. 1-88, with pls. i-ii.

1893 A

Die obersilurischen Fische von Oesel.

II Theil, *Selachii*, *Dipnoi*, *Ganoidei*, *Pteraspidae* und *Cephalaspidae*.

Mém. Acad. Imp. Sci. St. Pétersbourg (7), xli, No. 5, pp. 1-124, with pls. i-iii and 29 text figs.

1894 A

Metamerie am Primordial-cranium palæozoischer Fische.

Zoolog. Anzeiger, xvii, pp. 51-52.

A brief communication regarding the metamery of the primordial skull of *Thyestes* and *Tremataspis*.

Rohon, J. Victor—Continued.

1894 B

Zur Kenntniss der Tremataspiden (Nachtrag zu den Untersuchungen über "Die obersilurischen Fische von Oesel").

Mélanges géol. et paléont. Acad. Imp. Sci. St. Pétersbourg, vol. i, pp. 177-201, with 2 pls.

1895 A

Beitrag zur Kenntniss der Gattung *Ptyctodus*.

Verhandl. russ.-kais. mineralog. Gesellsch. St. Petersburg (2), xxxiii, pp. 1-16, with pl. i.

1895 B

Die Segmentirung am Primordial-cranium der obersilurischen Thyestiden.

Verhandl. russ.-kais. mineralog. Gessellsch. St. Petersburg (2), xxxiii, pp. 17-64, with pl. ii.

1896 A

Weitere Mittheilungen über die Gattung *Thyestes*.

Bull. Acad. Imp. Sci. St. Pétersbourg, iv, pp. 223-235, with 1 pl.

1896 B

Beiträge zur Classification der palæozoischen Fische.

Sitzungsber. k. böhm. Gesellsch. Wissensch., math.-naturw. Cl., 1896, ii, art. xxxvii, pp. 1-33, with 8 text figs.

1898 A

Bau der obersilurischen Dipnoer-Zähne.

Sitzungsber. k. böhm. Gessellsch. Wissensch., math.-naturw. Cl., 1898, art. xi, pp. 1-17, with plate of 11 figs.

Romanovskî, G.

1853 A

Ueber eine neue Gattung-versteinerter Fisch-Zähne.

Bull. Soc. Imp. Natur. Moscou, xxvi, pt. i, pp. 405-409, with pl. viii.

Describes genus *Dicrenodus*, type *D. okensis*.

1857 A

Ueber die Verschiedenheit der beiden Arten: *Chilodus tuberosus* Gieb. und *Dicrenodus okensis* Rom.

Bull. Soc. Imp. Natur. Moscou, xxx, pt. i, pp. 290-295, with 4 text figs.

1864 A

Description de quelques restes de poissons fossiles trouvés dans le calcaire carbonifère du gouvernement de Toula.

Bull. Soc. Imp. Natur. Moscou, xxxvii, pt. 2, pp. 157-170, with pls. iii, iv.

- Rosenberg, Emil.** 1891 A
Uebereinige Entwicklungsstadien des Handskelets der *Emys lutaria marsili*.
Morpholog. Jahrbuch, xviii, pp. 1-34, with pl. i.
In the footnotes are found numerous references to the literature bearing on the subject.
- Rouault, Marie.** 1858 A
Note sur les vertébrés fossiles des terrains sédimentaires de l'ouest de la France.
Comptes rend. Acad. Sci. Paris, xlvii, pp. 99-103.
The genus *Nummopalatus* is here established, p. 101.
- Ruddick, W. H.** See **Kingsley and Ruddick.**
- Rütimeyer, L.** 1857 A
Ueber schweizerische Anthracotherien.
Verhandl. naturf. Gesellsch. Basel, i, pp. 385-403.
- 1857 B
Ueber lebende und fossile Schweine.
Verhandl. naturf. Gesellsch. Basel, i, pp. 517-554.
- 1857 C
Ueber *Anthracotherium magnum* und *hippoidaeum*.
Neue Denkschr. schweizer. Gesellsch. Naturwiss., xv, art. viii, pp. 1-32, with pls. i, ii.
- 1862 A
Beiträge zur Kenntniss der fossilen Pferde und zur vergleichenden Odontographie der Hufthiere überhaupt.
Verhandl. naturf. Gesellsch. Basel, iii, pp. 558-696, with pls. i-iv.
- 1862 B
Die Fauna der Pfahlbauten der Schweiz.
Neue Denkschr. schweizer. Gesellsch. Naturwiss., ix, pp. 1-248, with pls. i-vi.
- 1865 A
Beiträge zu einer paläontologischen Geschichte der Wiederkauer, zunächst an Linné's Genus *Bos*.
Verhandl. naturf. Gesellsch. Basel, iv, pp. 299-354.
- 1867 A
Die fossilen Schildkröten von Solothurn.
See Lang, Fr., and Rütimeyer, L., 1867 A.
- 1867 B
Versuch einer natürlichen Geschichte des Rindes, in seinen Beziehungen zu
- Rütimeyer, L.**—Continued.
den Wiederkauern im Allgemeinen. Erste Abth.
Neue Denkschr. schweizer. Gesellsch. Naturwiss., xxii, pp. 1-102, with pls. i, ii.
- 1868 A
Versuch einer natürlichen Geschichte des Rindes, in seinen Beziehungen zu den Wiederkauern im Allgemeinen. Zweite Abth.
Neue Denkschr. schweizer. Gesellsch. Naturwiss., xxiii, pp. 1-175, with pls. i-iv, and 25 figs. in the text.
- 1873 A
Die fossilen Schildkröten von Solothurn und der übrigen Juraformation. Mit Beiträgen zur Kenntniss von Bau und Geschichte der Schildkröten im Allgemeinen.
Neue Denkschr. schweizer. Gesellsch. Naturwiss., xxv, art. 2, pp. 1-185, with pls. i-xvii.
- 1874 A
Ueber den Bau von Schale und Schädel bei lebenden und fossilen Schildkröten, als Beitrag zu einer paläontologischen Geschichte dieser Tiergruppe.
Verhandl. naturf. Gesellsch. Basel., vi, pp. 1-137.
- 1875 A
Weitere Beiträge zur Beurtheilung der Pferde der Quaternär-Epoche.
Abhandl. schweizer. paläontolog. Gesellsch., ii, pp. 1-34, with 3 pls.
Contains discussion of the teeth of living species of horses.
- 1877 A
Die Rinder der Tertiär-Epoche, nebst Vorstudien zu einer natürlichen Geschichte der Antilopen. Erster Theil. Mit drei Doppeltafeln.
Abhandl. schweizer. paläontolog. Gesellsch., iv, pp. 1-72.
- 1878 A
Die Rinder der Tertiär-Epoche, nebst Vorstudien zu einer natürlichen Geschichte der Antilopen. Zweiter Theil. Mit vier Doppeltafeln nebst Holzschnitten.
Abhandl. schweizer. paläontolog. Gesellsch., v, pp. 1-208.
- 1881 A
Beiträge zu einer natürlichen Geschichte der Hirsche. I Theil.
Abhandl. schweizer. paläontolog. Gesellsch., vii, pp. 1-8; viii, pp. 9-95, with 4 pls.
Introduction, with pls. i and ii in vol. vii, 1880.

Rüttimeyer, L.—Continued. 1882 A
Studien zur Geschichte der Hirsch-
familie. I. Schädelbau.
Verhandl. naturf. Gesellsch. Basel, vii, pp.
3-61.

1883 A
Beiträge zu einer natürlichen Ge-
schichte der Hirsche.
Abhandl. schweizer. paläontolog. Gesellsch.,
x, pp. 1-120, with pls. v-x.

1884 A
Studien zu der Geschichte der
Hirschfamilie. II. Gebiss.
Verhandl. naturf. Gesellsch. Basel, vii, pp.
399-464.

1888 A
Ueber einzige Beziehungen zwi-
schen den Säugethierstämmen alter
und neuer Welt. Erster Nachtrag zu
der eocänen Fauna von Egerkingen.
Abhandl. schweizer. paläontolog. Gesellsch.,
xv, pp. 1-63, pl. 1.
Reviewed by M. Schlosser in Archiv f. An-
throp., xix, pp. 141-145.

1890 A
Uebersicht der eocänen Fauna von
Egerkingen nebst einer Erwiderung
an Prof. E. D. Cope. Zweiter Nach-
trag zu der eocänen Fauna von Eger-
kingen (1862).

Abhandl. schweizer. paläontolog. Gesellsch.,
xvii, pp. 1-24.

See also Verhandl. naturf. Gesellsch. Basel,
1891, ix, pp. 331-362. For review by M. Schlos-
ser, see Archiv f. Anthrop., xx, pp. 113-114.

Contains a discussion of foot structure.

1891 A
Die eocäne Säugethier-Welt von
Egerkingen. Gesamtdarstellung und
dritter Nachtrag zu den "Eocänen
Säugethieren aus dem Gebiet des
schweizerischen Jura (1862)."

Abhandl. schweizer. paläontolog. Gesellsch.,
xviii, pp. 1-153, with pls. i-viii.

Reviewed by M. Schlosser in Archiv f. An-
throp., xxiii, pp. 139-141.

1892 A
Die eocänen Säugethiere von Eger-
kingen.

Verhandl. naturf. Gesellsch. Basel, x, pp.
101-129, with figs. A-I in the text.

Discusses the teeth of *Mammalia* and the re-
lationships of the mammals of Egerkingen to
those of the American Eocene.

See also **Lang and Rüttimeyer.**

Ryder, John A. 1877 A
On the evolution and homologies of
the incisors of the horse.
Proc. Acad. Nat. Sci. Phila., 1877, pp. 152-154.

1877 B
On the laws of digital reduction.
Amer. Naturalist, xi, pp. 603-607.

1878 A
On the mechanical genesis of tooth-
forms.
Proc. Acad. Nat. Sci. Phila., 1878, pp. 45-80,
with 11 figs. in the text.
Reviewed in Amer. Naturalist, xiii, pp. 446-
449.

1879 A
Further notes on the mechanical
genesis of tooth-forms.
Proc. Acad. Nat. Sci. Phila., 1879, pp. 47-51.

1879 B
On the origin of bilateral symmetry
and the numerous segments of the soft
rays of fishes.
Amer. Naturalist, xiii, pp. 41-43.

1885 A
On the morphology and evolution of
the tails of osseous fishes.
Proc. Amer. Assoc. Adv. Sci., 33d meeting,
Phila., 1884, pp. 532-533.
Abstract of paper read.

1885 B
The development of the rays of osse-
ous fishes.
Amer. Naturalist, xix, pp. 200-204, with 5 figs.

1885 C
On the translation forwards of the
rudiments of the pelvic fins of physo-
clist fishes.
Amer. Naturalist, xix, pp. 315-317.

1885 D
On the probable origin, homologies,
and development of the flukes of ceta-
ceans and sirenians.
Amer. Naturalist, xix, pp. 515-519.

1886 A
On the origin of heterocercy and the
evolution of the fins and fin rays of
fishes.
Report U.S. Fish Com. for 1884, pp. 981-1107,
pls. i-xi.

1890 A
The continuity of the primary matrix
of the scales and the actinotrichia of
Teleosts.
Amer. Naturalist, xxiv, pp. 489-491.

- Ryder, John A.**—Continued. 1892 A
On the mechanical genesis of the scales of fishes.
Proc. Acad. Nat. Sci. Phila., 1892, pp. 219-224, with 3 figs. in the text.
See notice of, in Amer. Naturalist, xxvii, p. 391.
Reprinted in Ann. and Mag. Nat. Hist. (6), xi, pp. 243-248.
- Safely, Robert.** 1866 A
Discovery of mastodon remains at Cohoes, N. Y.
Amer. Jour. Sci. (2), xlii, p. 426.
- Safford, J. M.** 1853 A.
Tooth of *Getalodus ohioensis*.
Amer. Jour. Sci. (2), xvi, p. 142, with 2 figs. in the text.
"Getalodus" is an evident misprint for *Petalodus*.
- 1892 A
The pelvis of a *Megalonyx* and other bones from Big Bone Cave, Tennessee.
Bull. Geol. Soc. America, iii, pp. 121-123.
- 1892 B
Exhibition of certain bones of the *Megalonyx* not before known.
Proc. Amer. Assoc. Adv. Sci., 40th meeting, Washington, 1891, p. 289.
Abstract of Safford, 1892 A.
- Sagemehl, M.** 1883 A
Beiträge zur vergleichenden Anatomie der Fische. I. Das Cranium von *Amia calva* L.
Morpholog. Jahrbuch, ix, pp. 177-228, with pl. x.
- 1884 A
Beiträge zur vergleichenden Anatomie der Fische. III. Das Cranium der Characiniden nebst allgemeinen Bemerkungen über die mit einem Weber'schen Apparat versehenen Physostomenfamilien.
Morpholog. Jahrbuch, x, pp. 1-119, with pls. i and ii and 1 woodcut.
- 1891 A
Beiträge zur vergleichenden Anatomie der Fische.
Morpholog. Jahrbuch, xvii, pp. 489-595, with pls. xxviii-xxix.
Contains numerous citations of the literature of the subject.
- St. Hilaire, Geoffroy,** 1809 A
Sur les tortues molles, nouveau genre sous le nom de *Trionyx*, et sur la formation des carapaces.
Ann. Mus. d'Hist. Nat. Paris, xiv, pp. 1-20, with pls. i-v.
- St. John, Orestes H.** 1870 A
Descriptions of fossil fishes from the upper Coal-measures of Nebraska.
Proc. Amer. Philos. Soc., xi, pp. 431-437.
- 1872 A
Descriptions of fossil fishes from the upper Coal-measures of Nebraska.
Final report U. S. Geol. Surv. of Nebraska and portions of the adjacent Territories, pp. 239-245; pls. iii, iv and vi.
- St. John, O. H., and Worthen, A. H.** 1875 A
Descriptions of fossil fishes.
Geol. Surv. Illinois, A. H. Worthen, director, vi, pp. 245-488, with pls. i-xxii.
Contains descriptions and figures of fossil fishes of the Carboniferous and Subcarboniferous, especially of Illinois.
- 1883 A
Descriptions of fossil fishes. A partial revision of the Cochlodonts and Psammodonts, including notices of miscellaneous materials acquired from the Carboniferous formations of the United States.
Geol. Surv. Illinois, A. H. Worthen, director, vii, 1883, pp. 55-264, pls. i-xxvi.
- St. John, Samuel.** 1851 A
On a specimen of the fossil ox (*Bos bombifrons*) found in Trumbull County, Ohio.
Proc. Amer. Assoc. Adv. Sci., v, p. 235. Title only.
Specimen referred by Leidy (Leidy, 1869 A, p. 374) to *B. cavifrons*.
- Salensky, W.** 1899 A
Zur Entwicklungsgeschichte des Ichthyopterygiums.
Proc. 4th Internat. Congress of Zoology, Cambridge, Eng., 1898, pp. 177-183.
- Salter, J. W.** 1867 A
On the tracks of *Pteraspis* (?) in the Upper Ludlow sandstone.
Quart. Jour. Geol. Soc., xxiii, pp. 333-339, with figs. in the text.
- Sanson, A.** 1878 A
Détermination spécifique des ossements fossiles ou anciens de bovidés.
Comptes rend. Acad. Sci. Paris, lxxxvii, pp. 756-759.
- Saporta, Gaston de.** 1877 A
Letters to Dr. F. V. Hayden.
Amer. Naturalist, xi, pp. 187-188.
Expresses gratification at the progress of palæontology in North America.

- Sauvage, H. E.** 1870 A
Recherches sur les poissons fossiles des terrains crétacés de la Sarthe.
Ann. Sci. Géol., Paris, ii, art. 7, pp. 1-44, with pls. xvi, xvii (figs. 1-89).
- 1873 A
De la classification des poissons que composent le famille des Triglides (Joues-cuirassées de Cuvier et Valenciennes).
Comptes rend. Acad. Sci. Paris, lxxvii, pp. 723-726.
- 1874 A
Revision des espèces du groupe des épinoches.
Nouv. Arch. du Mus. d'Hist. Nat. Paris, x, pp. 5-38, with pl. i.
- 1874 B
Mémoire sur les dinosauriens et les crocodiliens des terrains jurassiques de Boulogne-sur-mer.
Mém. Soc. Géol. France (2), x, pp. 1-57, with pl. v-x.
- 1875 A
Note sur les poissons fossiles.
Bull. Soc. Géol. France (3), iii, pp. 631-642; pls. xxii, xxiii.
- 1875 B
Note sur le genre *Nummopalatus* et sur les espèces de ce genre trouvés dans les terrains tertiaires de la France.
Bull. Soc. Géol. France (3), iii, pp. 613-642, with pls. xxii, xxiii.
- 1876 A
Notes sur les reptiles fossiles.
Bull. Soc. Géol. France (3), iv, pp. 435-442, pls. xi-xii.
Treats of *Polycotylus*, *Iguanodon*, etc.
- 1878 A
Prodrome des Plésiosaures et Élasmosaures des formations jurassiques supérieures de Boulogne-sur-mer.
Ann. Sci. Naturelles (6), Zool., viii, art. 13, pp. 1-38, pls. xxvi, xxvii.
- 1878 B
Description de poissons nouveaux ou imparfaitement connus de la collection du Muséum d'Histoire Naturelle Famille des Scorpénidées, des Platycephalides et des Triglidées.
Nouv. Arch. du Mus. d'Hist. Nat. Paris (2), i, pp. 109-158, with pls. i, ii.
- 1879 A
Étude sur les poissons et les reptiles des terrains crétacés et jurassiques supérieurs de l'Yonne.
Bull. Soc. Sci. hist. et nat. de l'Yonne, xxxiii, pp. 20-84, with pls. i-viii.
- Sauvage, H. E.—Continued.** 1887 A
Note sur l'arc pectoral d'un Ichthyosaure du Lias.
Bull. Soc. Géol. France (3), xv, pp. 726-728, pl. xxvii.
- 1888 A
Poissons du terrain houiller de Commentry; I. Coup d'œil sur la faune ichthyologique du terrain carbonifère et du terrain houiller; II. La faune ichthyologique de Commentry; III. Description des espèces Famille des Palæoniscidées.
Bull. Soc. de l'Industrie Min. (3), ii livrais. 4^{me}, pp. 39-120.
- Savage, J.** 1878 A
On mastodon remains in Douglas County [Kansas].
Trans. Kansas Acad. Sci., vi, pp. 10, 11.
- Scheidt, Paul.** 1894 A
Morphologie und Ontogenie des Gebisses der Hauskatze.
Morpholog. Jahrbuch, xxi, pp. 425-462, with pl. xii.
- Schenk, F.** 1897 A
Studien über die Entwicklung des knöchernen Unterkiefers der Vögel.
Sitzungsber. k. p. Akad. Wissensch. Wien, math.-naturw. Cl., cvi, Abth. iii, pp. 319-344, with pls. i-v.
- Schlosser, M.** 1883 A
Über *Chalicotherium*-Arten.
Neues Jahrb. Mineral., 1883, ii, pp. 164-169.
- 1884 A
Die Nager des europäischen Tertiärs nebst Betrachtungen über die Organisation und die geschichtliche Entwicklung der Nager überhaupt.
Palæontographica, xxxi, pp. 9-162, with pls. v-xii.
Nachtrag und Berichtigungen zu "Die Nager des europäischen Tertiärs," xxxi, pp. 323-328.
- 1884 B
Nachträge und Berichtigungen zu: die Nager des europäischen Tertiärs. Palæontographica. 31. Band.
Zoolog. Anzeiger, vii, pp. 639-647.
- 1884 C
Literaturbericht in Beziehung zur Anthropologie mit Einschluss der fossilen und recenten Säugethiere.
Archiv f. Anthrop., xvi, pp. 98-135.
- 1885 A
Zur Stammesgeschichte der Hufthiere.
Zoolog. Anzeiger, viii, pp. 683-691.

Schlosser, M.—Continued. 1886 A
Zur Stammesgeschichte der Hufthiere.
Zoolog. Anzeiger, ix, pp. 252-256, 432-433.
Pp. 432-433 are entitled: Erklärung.

1886 B
Beiträge zur Kenntniss der Stammesgeschichte der Hufthiere und Versuch einer Systematik der Paar- und Unpaarhufer.
Morpholog. Jahrbuch, xii, pp. 1-136, with pls. i-vi.
Abstract in Archiv f. Anthrop., xviii, pp. 131-139.

1886 C
Paläontologische Notizen. Ueber das Verhältnis der Cope'schen *Creodonta* zu den übrigen Fleischfressern.
Morpholog. Jahrbuch, xii, pp. 287-298.
Abstract in Archiv f. Anthrop., xviii, pp. 130-131.

1886 D
Literaturbericht in Beziehung zur Anthropologie mit Einschluss der fossilen und recenten Säugethiere für 1884, 1885.
Archiv f. Anthrop., xvii, pp. 118-194.

1887 A
Erwiderung gegen E. D. Cope.
Morpholog. Jahrbuch, xii, pp. 575-580.
Reply to review by Professor Cope in Amer. Naturalist, 1886, pp. 719-721 (Cope, E. D., 1886 K).

1887 B
Die Affen, Lemuren, Chiropteren, Insectivoren, Marsupialier, Creodonten und Carnivoren des europäischen Tertiärs und deren Beziehungen zu ihren lebenden und fossilen aus europäischen Verwandten.
Beiträge Paläontologie Oesterreich-Ungarns und des Orients (Mojsisovics und Neumayr), vi, Heft. i und ii, pp. 1-227, with pls. i-ix.
Abstract in Archiv f. Anthrop., xvii, pp. 279-285.

1887 C
Literaturbericht in Beziehung für Anthropologie mit Einschluss der fossilen und recenten Säugethiere für 1886.
Archiv f. Anthrop., xviii, pp. 105-152.

1888 A
Ueber die Beziehungen der ausgestorbenen Säugethierfaunen und ihr Ver-

Schlosser, M.—Continued.
hältniss zur Säugethierfauna der Gegenwart.
Biolog. Centralbl., viii, pp. 582-600, 609-631.
Abstract in Archiv f. Anthrop., xx, pp. 154-160.

1888 B
Die Affen, Lemuren, Chiropteren, Insectivoren, Marsupialier, Creodonten und Carnivoren des europäischen Tertiärs und deren Beziehungen zu ihren lebenden und fossilen aussereuropäischen Verwandten. Part II.
Beiträge Paläontologie Oesterreich-Ungarns und des Orients (Mojsisovics und Neumayr), vii, pp. 1-162.
Abstract in Archiv f. Anthrop., xvii, pp. 285-300, with pl. xii.

1889 A
Ueber die Modificationen des Extremitätenskelets bei den einzelnen Säugethierstämmen.
Biolog. Centralbl., ix, pp. 684-698, 716-729.

1889 B
Literaturbericht für Zoologie in Beziehung zur Anthropologie mit Einschluss der fossilen und recenten Säugethiere für das Jahr 1887 [and 1888].
Archiv f. Anthrop., xix, pp. 78-164.
The notices of the literature for 1887 occupies pp. 78-116; for that of 1888, pp. 117-164.

1890 A
Ueber die Deutung des Milchgebisses der Säugethiere.
Biolog. Centralbl. x, pp. 81-92.
Abstract in Archiv f. Anthrop., xxi, pp. 136-137.

1890 B
Die Affen, Lemuren, Chiropteren, Insectivoren, Marsupialier, Creodonten und Carnivoren des europäischen Tertiärs.
Beiträge Paläontologie Oesterreich-Ungarns und des Orients (Mojsisovics und Neumayr), viii, pp. 1-107, [387-492.]
Abstract in Zoolog. Record for 1890, Mamm. p. 14.
Mention is made in this work of many American forms, and their relationships are discussed.

1890 C
Die Differenzierung des Säugethiergebisses.
Biolog. Centralbl. x, pp. 238-252; 264-277, with 7 figs. in the text.
Abstract in Archiv f. Anthrop., xxi, pp. 132-136.

Schlosser, M.—Continued. 1890 D
Ueber die Modificationen des Extremitätenskelets bei den einzelnen Säugethierstämmen.

Biolog. Centralbl., x, pp. 684-698; 716-729.

1890 E

Literaturbericht für Zoologie in Beziehung zur Anthropologie mit Einschluss der lebenden und fossilen Säugethiere für das Jahr 1889.

Archiv f. Anthrop., xx, pp. 113-161.

1891 A

Literaturbericht für Zoologie in Beziehung zur Anthropologie mit Einschluss der lebenden und fossilen Säugethiere für das Jahr 1890.

Archiv f. Anthrop., xxi, pp. 97-141.

1892 A

Die Entwicklung der verschiedenen Säugethierzahnformen im Laufe der geologischen Perioden.

Verhandl. deutsch. odontolog. Gesellsch., iii, pp. 203-230.

1892 B

Literaturbericht für Zoologie in Beziehung zur Anthropologie mit Einschluss der lebenden und fossilen Säugethiere für das Jahr 1891.

Archiv f. Anthrop., xxii, pp. 89-130.

1893 A

Ueber die Deutung des Milchgebisses der Säugethiere.

Verhandl. deutsch. odontolog. Gesellsch., iv, pp. 296-307, with 1 text fig.

Followed by Dr. Röse on same subject.

1893 B

Literaturbericht für Zoologie in Beziehung zur Anthropologie mit Einschluss der lebenden und fossilen Säugethiere für das Jahr 1892.

Archiv f. Anthrop., xxiii, pp. 111-160.

1894 A

Bemerkungen zu Rütimeyer's "öcöne Säugethierwelt von Egerkingen."

Zoolog. Anzeiger, xvii, pp. 157-162.

1895 A

Literaturbericht für Zoologie in Beziehung zur Anthropologie mit Einschluss der lebenden und fossilen Säugethiere für das Jahr 1893 [and 1894].

Archiv f. Anthrop., xxiv, pp. 101-182.

Pp. 101-145 are occupied with the literature of 1893; pp. 146-182 with that of 1894.

Schlosser, M.—Continued. 1897 A

Literaturbericht für Zoologie in Beziehung zur Anthropologie mit Einschluss der lebenden und fossilen Säugethiere für das Jahr 1895 [and 1896].

Archiv f. Anthrop., xxv, pp. 157-244.

Pp. 157-198 are taken up with the literature of 1895; pp. 198-244 with that for 1896.

1898 A

Literaturbericht für Zoologie in Beziehung zur Anthropologie mit Einschluss der lebenden und fossilen Säugethiere für das Jahr 1897.

Archiv f. Anthrop., xxvi, pp. 151-199.

1899 A

Parailurus anglicus and *Ursus böckii* aus den Ligniten von Baróth-Köpecz, Comitat Háromszék in Ungarn.

Mittheil. Jahrb. der kgl. ungar. geol. Anstalt, xiii, pp. 67-95, with pls. x-xii.

1899 B

Ueber die Bären und bärenähnlichen Formen des europäischen Tertiärs.

Paläontographica, xlv, pp. 95-147, with pls. xiii, xiv.

1900 A

Ursus oder *Ursavus* oder *Hyaenarctos*?

Centralbl. Min., Geol., Paläont., 1900, pp. 261-265; with 3 figs. in the text.

Schlüter, Clemens.

1881 A

Ueber die Fischgattung *Ancistrodon*.

Verhandl. naturf. Vereines preuss. Rheinlande, xxxviii, pp. 61-62 with 3 figs. in the text.

Schmidt, Friedrich.

1866 A

Ueber *Thyestes verrucosus* Eichw., und *Cephalaspis schrenckii* Pand., nebst einer Einleitung über das Vorkommen silurischer Fischreste auf der Insel Oesel.

Verhandl. russ.-kais. mineralog. Gesellsch. St. Petersburg (2), i, pp. 217-250, with pls. iv-vi.

1872 A

Wissenschaftliche Resultate der zur Aufsuchung eines angekündigten Mammothcadavers von der Kaiserlichen Akademie der Wissenschaften an den unteren Jenissei ausgesandten Expedition.

Mém. Acad. Imp. Sci. St.-Petersbourg (7), xviii, pp. 1-vi; 1-168.

Pp. 28-36 are devoted to "Das Mammoth und seine Lagerstätte."

- Schmidt, Friedrich**—Cont'd. 1873 A
Note on *Pteraspis kneri*.
Geol. Magazine, x, pp. 152-153, with 3 figs. in the text.
-
- 1873 B
Further remarks on *Pteraspis*.
Geol. Magazine (1), x, pp. 330-331.
The author claims to have found osseous lacunæ in the shield of *Pteraspis*. See, also, reply by E. R. Lankester, this volume, p. 478.
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- 1873 C
Ueber die Pteraspiden überhaupt und über *Pteraspis kneri* aus den ober-silurischen Schichten Galiziens insbesondere.
Verhandl. russ.-kais. mineralog. Gesellsch. St. Petersburg (2), viii, pp. 132-152, with pl. v.
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- 1894 A
Ueber *Cephalaspis* (*Thyestes*) *schrencki* Pand. aus dem Obersilur von Rotzekül auf Oesel.
Mélanges géol. et paléont. Acad. Imp. Sci. St. Pétersbourg, i, pp. 203-210, with 1 pl.
- Schmidt, Oscar.** 1886 A
The *Mammalia* in their relation to primeval times.
Pp. i-xxii; 1-308, with 51 woodcuts. 8vo. New York, D. Appleton and Co.
- Schneider, Anton.** 1886 A
Ueber die Flossen der *Dipnoi* und die Systematik von *Lepidosiren* und *Protopterus*.
Zoolog. Anzeiger, ix, pp. 521-524.
- Schuchert, Charles.** 1900 A
[Account of visits to Alabama, for the purpose of collecting bones of the zeuglodon.]
Proc. U. S. Nat. Mus., xxiii, pp. 328-329.
This account is incorporated in paper by F. A. Lucas (Lucas, F. A., 1900 E).
- Schulze, Eilhard.** 1894 A
Ueber die Abwärtsbiegung des Schwanztheiles der Wirbelsäule bei *Ichthyosaurus*.
Sitzungsber. k. p. Akad. Wissensch. Berlin. 1894, pp. 1133-1134.
- Schwalbe, G.** 1894 A
Ueber Theorien der Dentition.
Verhandl. anatom. Gesellsch., 8th meeting, 1894, pp. 5-45.
Appended is a list of 80 papers on the subject discussed.
Abstract of, by M. S. Schlosser in Archiv f. Anthropol., xxiv, pp. 179-180.
- Science.** 1885 A
Professor Marsh on the *Dinocerata*.
Science, v, pp. 488-490, with 1 map and 1 woodcut.
A review of Marsh, O. C., 1884 F, with correction in vol. vi, p. 454.
-
- 1885 B
The relationships between dinosaurs and birds.
Science, vi, p. 295.
A review of Prof. B. Vetter's article in Festschrift der naturw. Gesellsch. Isis in Dresden, May, 1885, pp. 109-122.
-
- 1885 C
[Prof. O. C. Marsh on the brains of Tertiary vertebrates. A notice of his address before the British Association for the Advancement of Science.]
Science, vi, p. 360.
- Scott, W. B.** 1883 A
Two new Eocene lophiodonts.
Contrib. E. M. Mus. Geol. and Arch.; Princeton Coll. Bull. No. 3, pp. 46-53, with pl. viii.
Describes *Desmatotherium guyotii* and *Dilophodon minusculus*.
-
- 1884 A
A new marsupial from the Miocene of Colorado.
Amer. Jour. Sci. (3), xxvii, pp. 442-443, with 1 fig. in the text.
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- 1884 B
[Communication to Princeton Science Club relative to the hind foot of the American *Entelodon*.]
Science, iii, p. 266.
-
- 1884 C
[Abstract of paper read before the Amer. Assoc. Adv. Sci., 1884, on the osteology of *Oreodon*.]
Science, iii, p. 342.
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- 1885 A
A fossil elk or moose from the Quaternary of New Jersey (*Cervalces americanus*).
Science, v, pp. 420-422, with two woodcuts.
Notice of this paper in Amer. Naturalist, xix, p. 495.
-
- 1885 B
The osteology of *Oreodon*.
Proc. Amer. Assoc. Adv. Sci., 33d meeting, Phila., 1884, pp. 492-493.
An abstract of paper read.
-
- 1885 C
Cervalces americanus, a fossil moose or elk from the Quaternary of New Jersey.
Proc. Acad. Nat. Sci. Phila., 1885, pp. 174-202, with pl. ii and 7 figs. in the text.

- Scott, W. B.—Continued.** 1885 D
Cervalces americanus.
 Fourth annual report E. M. Mus. Geol. and Arch., Princeton Coll., pp. 4-6, with pl.
- 1886 A
 On some new forms of the *Dinocerata*.
 Amer. Jour. Sci. (3), xxxi, pp. 303-307, with 4 figs. in the text.
- 1886 B
 Some points in the evolution of the horses.
 Science, vii, p. 13, with 2 woodcuts.
- 1887 A
 On American elephant myths.
 Scribner's Magazine, i, pp. 469-478, with 10 text figs.
- 1888 A
 Origin of American *Carnivora*.
 Proc. Amer. Assoc. Adv. Sci., 36th meeting, New York, 1887, pp. 258-259.
 Abstract of paper read.
- 1888 B
 On some new and little-known creodonts.
 Jour. Acad. Nat. Sci. Phila. (2), ix, pp. 155-185, pls. v-vii.
 Extra copies printed in advance for the author Oct. 10, 1887.
 Reviewed by M. Schlosser in Archiv f. Anthrop., xviii, pp. 139-140.
- 1889 A
 A comparison of the American and European Tertiary *Mammalia*.
 Princeton Coll. Bull., i, pp. 20-21.
- 1889 B
 Notes on the osteology and systematic position of *Dinictis felina*, Leidy.
 Proc. Acad. Nat. Sci. Phila., 1889, pp. 211-244, with 7 figs. in the text.
 Abstract in Princeton Coll. Bull., i, p. 118, 1889.
- 1889 C
 The *Oreodontidæ*.
 Princeton Coll. Bull., i, pp. 75-77.
- 1890 A
 The *Mammalia* of the Uinta formation. Part I. The geological and faunal relations of the Uinta formation. Part II. The *Creodonta*, *Rodentia*, and *Artiodactyla*.
 Trans. Amer. Philos. Soc., xvi, pp. 461-504, with pls. vii, x, and xi.
 This forms a portion of a joint paper by Professors Scott and Osborn. See Osborn, H. F. 1890 D, and Scott and Osborn, 1890 A.
 Notice of, occurs in Princeton Coll. Bull., ii, p. 46.
- Scott, W. B.—Continued.** 1890 B
 Beiträge zur Kenntniss der *Oreodontidæ*.
 Morpholog. Jahrbuch, xvi, pp. 319-395, with pls. xii-xvi and 10 figs. in the text.
 For review of this paper, by R. Lydekker, see the Geol. Magazine (3), vii, p. 568; by M. Schlosser, Archiv f. Anthrop., xxi, pp. 137-139.
- 1890 C
 The dogs of the American Miocene.
 Princeton Coll. Bull., ii, pp. 37-39.
- 1891 A
 On the osteology of *Poëbrotherium*; a contribution to the phylogeny of the *Tylopoda*.
 Jour. Morphology, v, pp. 1-78, pls. i-iii.
 An abstract is given by M. Schlosser in Archiv f. Anthrop., xxii, 1894, pp. 118-120.
- 1891 B
 On the osteology of *Mesohippus* and *Leptomeryx*, with observations on the modes and factors of evolution in the *Mammalia*.
 Jour. Morphology, v, pp. 301-406, with pls. xxii, xxiii.
 Review in Amer. Geologist, ix, pp. 402-404; also by Schlosser in Archiv f. Anthrop., xxii, 1894, pp. 120-122.
- 1891 C
 On the mode of evolution in the *Mammalia*.
 Princeton Coll. Bull., iii, pp. 62-68.
- 1891 D
 The Princeton scientific expedition of 1891.
 Princeton Coll. Bull., iii, pp. 88-91.
- 1892 A
 The evolution of the premolar teeth in the mammals.
 Proc. Acad. Nat. Sci. Phila., 1892, pp. 405-444, with 8 figs. in the text.
 See for abstract, Princeton Coll. Bull., iv, pp. 74-76; for review by M. Schlosser, Archiv f. Anthrop., xxiii, p. 155.
- 1892 B
 A revision of the North American *Creodonta*, with notes on some genera which have been referred to that group.
 Proc. Acad. Nat. Sci. Phila., 1892, pp. 291-323.
 Reviewed by M. Schlosser in Archiv f. Anthrop., xxiii, pp. 141-142.
- 1892 C
 On some of the factors in the evolution of the *Mammalia*.
 Princeton Coll. Bull., iv, pp. 11-17.

Scott, W. B.—Continued. 1892 D
The genera of American *Creodonta*.
Princeton Coll. Bull., iv, pp. 76–81.

— 1893 A
On a new musteline from the John
Day Miocene.

Amer. Naturalist, xxvii, pp. 658–659.
Description of *Parietis primævus*.

— 1893 B
The mammals of the Deep River
beds.

Amer. Naturalist, xxvii, pp. 659–662.
List of species and description of new species.

— 1893 C
The Princeton scientific expedition
of 1893.

Princeton Coll. Bull., v, pp. 80–84.

— 1894 A
A new insectivore from the White
River beds.

Proc. Acad. Nat. Sci. Phila., 1894, pp. 446–448.

— 1894 B
Notes on the osteology of *Agriochaerus*
Leidy (*Artionyx* O. and W.).

Proc. Amer. Philos. Soc., xxxiii, pp. 243–251,
with 3 text figs.

Notice of this paper in Amer. Naturalist,
xxviii, p. 952, and xxix, p. 368; also in Archiv
f. Anthrop., xxiv, p. 170. Abstract in Princeton
Coll. Bull., vi, pp. 98–100, 1894.

— 1894 C
The manus of a *Hyopotamus*.
Amer. Naturalist, xxviii, pp. 164–165.

— 1894 D
Notes on the osteology of *Ancodus*
(*Hyopotamus*).

Geol. Magazine (4), i, pp. 492–493.

— 1894 E
The structure and relationships of
Ancodus.

Jour. Acad. Nat. Sci. Phila., ix, pp. 461–497,
pls. xxliii, xxiv, with text fig. showing restora-
tion of the skeleton.

Appendix, p. 536, describing the new species
A. rostratus.

Review by M. Schlosser in Archiv f. An-
throp., xxv, pp. 219–221.

— 1894 F
The osteology of *Hyænodon*.
Jour. Acad. Nat. Sci. Phila., ix, pp. 499–535,
with 10 figs. in the text.

Review by M. Schlosser in Archiv f. An-
throp., xxv, pp. 218–219.

— 1895 A
The osteology and relations of *Pro-
toceras*.

Jour. Morphology, xi, pp. 303–374, pls. xx–xxii.

Reviewed by M. Schlosser in Archiv f.
Anthrop., xxv, pp. 217–218.

Scott, W. B.—Continued. 1895 B
A restoration of *Hyænodon*.
Geol. Magazine (4), ii, pp. 441–443, pl. xii A.

— 1895 C
The *Mammalia* of the Deep River
beds.

Trans. Amer. Philos. Soc., xviii, pp. 55–185,
with pls. i–vi.

Abstract in Princeton Coll. Bull., vi, pp. 76–
78, 1894. Noticed by M. Schlosser in Archiv
f. Anthrop., xxiv, pp. 168–170.

This memoir, or reprints of it, appears to
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The imprint "1895" is on the cover of the part
containing it.

— 1895 D
A new Geomyid from the Upper
Eocene.

Amer. Naturalist, xxix, pp. 923–924.

Abstract of paper in the Proc. Nat. Sci.,
Phila. Acad., 1895, describing *Protoptychus*
hatcheri; reviewed by M. Schlosser in Archiv f.
Anthrop., xxv, p. 182.

— 1895 E
Protoptychus hatcheri, a new rodent
from the Uinta Eocene.

Proc. Acad. Nat. Sci. Phila., 1895, pp. 269–286,
with 6 figs. in the text.

— 1895 F
On the *Creodonta*.
Report Brit. Assoc. Adv. Sci., 1895, lxv., pp.
719–720.

— 1896 A
On the osteology of *Elotherium*,
Pomel.

Compte-rendu des séances du troisième Con-
gress Internat. de Zoologie, Leyden, 1895, pp.
317–319.

— 1896 B
Die Osteologie von *Hyracodon*, Leidy.
Festschrift zum 70sten Geburtstage von Carl
Gegenbaur, ii, pp. 353–384, with pls. i–iii.

— 1897 A
Preliminary notes on the White
River *Canidæ*.
Princeton Univ. Bull., ix, pp. 1–3.

— 1897 B
The osteology of *Hyracodon*.
Princeton Univ. Bull., ix, pp. 11–13.

— 1898 A
The osteology of *Elotherium*.
Trans. Amer. Philos. Soc., xix, pp. 273–324,
with pls. xvii, xviii.

— 1898 B
Notes on the *Canidæ* of the White
River Oligocene.

Trans. Amer. Philos. Soc., xix, pp. 327–415,
with pls. xix, xx.

- Scott, W. B.**—Continued. 1898 C
Preliminary note on the selenodont artiodactyls of the Uinta formation.
Proc. Amer. Philos. Soc., xxxvii, pp. 73-81.
- 1898 D
Memoir of Edward D. Cope.
Pull. Geol. Soc. America, ix, pp. 401-408.
- 1899 A
The selenodont artiodactyls of the Uinta Eocene.
Trans. Wagner Free Inst. Sci., Phila., vi, pp. ix-xiii; 1-121, with pls. i-iv.
Note on, by H. F. Osborn in Science (2), xi, 1900 p. 115.
- Scott, W. B., and Osborn, H. F.** 1882 A
Orthocynodon, an animal related to the rhinoceros, from the Bridger Eocene.
Amer. Jour. Sci. (3), xxiv, pp. 223-225.
Reprinted in Ann. and Mag. Nat. Hist. (5), 1882, pp. 332-334.
- 1883 A
On the skull of the Eocene rhinoceros, *Orthocynodon*, and the relation of this genus to other members of the group.
Contrib. E. M. Mus. Geol. and Arch.; Princeton Coll., Bull. No. 3, pp. 1-22, with pl. v, and 1 fig. in the text.
- 1884 A
On the origin and development of the rhinoceros group.
Report Brit. Assoc. Adv. Sci., 53d meeting, Southport, 1883, p. 528.
A brief abstract.
- 1887 A
Preliminary report on the vertebrate fossils of the Uinta formation, collected by the Princeton expedition of 1886.
Proc. Amer. Philos. Soc., xxiv, pp. 255-264.
Reviewed by M. Schlosser in Archiv f. Anthrop., xix, p. 97.
- 1887 B
Preliminary account of the fossil mammals from the White River formation, contained in the Museum of Comparative Zoology.
Bull. Mus. Comp. Zool., xiii, pp. 151-171, with pls. i-ii, and 9 figs. in the text.
Reviewed by M. Schlosser in Archiv f. Anthrop., xix, pp. 91-98.
- 1890 A
The *Mammalia* of the Uinta formation. Part I. The geological and faunal relations of the Uinta formation. Part II. The *Creodonta*, by W. B. Scott. Part III. The *Perissodactyla* by H. F. Osborn, W. B., and Osborn, H. F.—Cont'd.
born. Part IV. The evolution of the ungulate foot, by H. F. Osborn.
Trans. Amer. Philos. Soc., xvi, pp. 461-572; pls. vii-xi; text figs. 1-13.
Referred to under designations Scott, W. B., 1890 A and Osborn, H. F., 1890 D.
Author's reprints of this paper were issued Aug. 20, 1889. The imprint of Part III of the Transactions gives the date as 1890.
Reviewed by M. Schlosser in Archiv f. Anthrop., xx, pp. 123-134.
- 1890 B
Preliminary account of the fossil mammals from the White River and Loup Fork formations contained in the Museum of Comparative Zoology. Part II. *Carnivora* and *Artiodactyla*, by W. B. Scott. *Perissodactyla*, by Henry F. Osborn.
Bull. Mus. Comp. Zool., xx, pp. 65-100, with pls. i-iii and 18 figs. in the text.
Abstract in Zoolog. Record for 1890, Mamm., p. 15. Reviewed by M. Schlosser in Archiv f. Anthrop., xx, pp. 114-116.
See also Osborn, Scott, and Speir.
- Seebohm, Henry.** 1889 A
An attempt to diagnose the suborders of the ancient ardeino-anserine assemblage of birds by the aid of osteological characters alone.
The Ibis (6), i, pp. 92-104.
- Seeley, Harry G.** 1865 A
On the pterodactyle as evidence of a new subclass of *Vertebrata* (*Sauromnia*).
Report Brit. Assoc. Adv. Sci., 34th meeting, Bath, 1864, p. 69.
- 1866 A
An epitome of the evidence that pterodactyles are not reptiles, but a new subclass of vertebrate animals allied to birds (*Sauromnia*).
Ann. and Mag. Nat. Hist. (3), xvii, pp. 321-331.
- 1870 A
Remarks on Professor Owen's monograph on *Dimorphodon*.
Ann. and Mag. Nat. Hist. (4), vi, pp. 129-152, with several text figs.
- 1870 B
The *Ornithosauria*, an elementary study of the bones of pterodactyles, made from fossil remains found in the Cambridge upper Greensand, and arranged in the Woodwardian Museum of the University of Cambridge.
Cambridge, 1870, 8 vo., pp. i-xiii; 1-135, with pls. i-xii.
The appendix, pp. 129-132, is devoted to the bibliography of the subject.

Seeley, Harry G.—Continued. 1871 A
Note on Professor Cope's interpretation of the ichthyosaurian head.

Ann. and Mag. Nat. Hist. (4), vii, pp. 266-268: 389.

This note refers to paper by E. D. Cope. in Amer. Naturalist, October, 1870.

1871 B

Note on some chelonian remains from the London Clay.

Ann. and Mag. Nat. Hist. (4), vii, pp. 227-233, with 1 fig. in the text.

Describes the new genus *Glossoschelys*.

1871 C

Additional evidence of the structure of the head in ornithosaurs from the Cambridge upper Greensand; being a supplement to "The *Ornithosauria*."

Ann. and Mag. Nat. Hist. (4), vii, pp. 20-36, with pls. ii, iii.

1874 A

Note on the generic modifications of the plesiosaurian pectoral arch.

Quart. Jour. Geol. Soc., xxx, pp. 436-449, with 13 text figs.

1876 A

On the organization of the *Ornithosauria*.

Jour. Linn. Soc. Lond., xliii, pp. 84-107, with pl. xi.

Review of this paper by "W. D." in Geol. Magazine (2), iv, 1877, p. 124.

1876 B

On the British fossil Cretaceous birds.

Quart. Jour. Geol. Soc., xxxii, pp. 496-512, with pls. xxvi-xxvii.

1879 A

On the *Dinosauria*.

Proc. Geologists' Assoc., vi, pp. 175-185.

1880 A

Report on the mode of reproduction of certain species of *Ichthyosaurus* from the Lias of England and Würtemberg.

Report Brit. Assoc. Adv. Sci., 50th meeting, Swansea, 1880, pp. 68-76, with pl. i.

1880 B

Note on *Psephophorus polygonus*, Meyer, a new type of chelonian reptile allied to the leathery turtle.

Quart. Jour. Geol. Soc., xxxvi, pp. 406-413, with pl. xv.

1887 A

On *Aristosuchus pusillus* (Owen), being further notes on the fossils described by Sir R. Owen as *Poikilopleuron pusillus*.

Quart. Jour. Geol. Soc., xliii, pp. 221-228, with pl. xii.

Seeley, Harry G.—Continued. 1887 B
Mr. Dollo's notes on the dinosaurian fauna of Bernissart.

Geol. Magazine (3), iv, pp. 80-87, 124-130.

1887 C

On the mode of development of the young in *Plesiosaurus*.

Geol. Magazine (3), iv, pp. 562-563.

1888 A

On the mode of development of the young in *Plesiosaurus*.

Report Brit. Assoc. Adv. Sci., 57th meeting, Manchester, 1887, pp. 697-698.

1888 B

The classification of the *Dinosauria*.

Report Brit. Assoc. Adv. Sci., 57th meeting, Manchester, 1887, pp. 698-699.

1888 C

On *Thecospondylus daviesi* (Seeley), with some remarks on the classification of the *Dinosauria*.

Quart. Jour. Geol. Soc., xliv, pp. 79-87, with 5 text figs.

1888 D

Researches on the structure, organization, and classification of the fossil *Reptilia*. II. On *Pareiasaurus bombidens* (Owen), and the significance of its affinities to amphibians, reptiles, and mammals.

Philos. Trans. Roy. Soc. Lond., clxxix, pp. 59-155, with pls. xii-xxi and 14 figs. in the text.

1888 E

Researches on the structure, organization, and classification of the fossil *Reptilia*. III. On parts of the skeleton of a mammal from the Triassic rocks of Klipfontein, Fraserberg, South Africa, (*Theriodesmus phylarchus* Seeley), illustrating the reptilian inheritance in the mammalian hand.

Philos. Trans. Roy. Soc., clxxix, pp. 141-155, with pl. xxvi and 15 figs. in the text.

Reviewed by M. Schlosser in Archiv f. Anthropol., xix, pp. 145-146.

1888 F

Researches on the structure, organization, and classification of the fossil *Reptilia*. V. On associated bones of a small Anomodont reptile, *Keirognathus cordylus* (Seeley), showing the relative dimensions of the anterior parts of the skeleton and structure of the fore limb and shoulder girdle.

Philos. Trans. Roy. Soc. Lond., clxxix, B, p. 487-501, with pls. lxxv-lxxvi.

- Seeley, Harry G.**—Continued. 1888 G
On the classification of the fossil animals commonly named *Dinosauria*.
Proc. Roy. Soc. Lond., xliii, pp. 165-171, with 4 figs.
- 1888 H
On the nature and limits of reptilian character in mammalian teeth.
Proc. Roy. Soc. Lond., xliv, pp. 129-141, with 8 text figs.
Reviewed by M. Schlosser in Archiv f. Anthropol., xix, p. 160.
- 1889 A
Researches on the structure, organization, and classification of the fossil *Reptilia*. VI. On the Anomodont *Reptilia* and their allies.
Philos. Trans. Roy. Soc., Lond., clxxx, pp. 215-296, with pls. 9-25.
- 1891 A
The ornithosaurian pelvis.
Ann. and Mag. Nat. Hist. (6), vii, pp. 237-255, with 16 figs. in the text.
- 1891 B
On the shoulder girdle in Cretaceous *Ornithosauria*.
Ann. and Mag. Nat. Hist. (6), vii, pp. 438-445, with 2 figs. in the text.
- 1892 A
Researches on the structure, organization, and classification of the fossil *Reptilia*. VII. Further observations on *Pareiasaurus*.
Philos. Trans. Roy. Soc., clxxxiii, pp. 311-370, with pls. xvii-xxiii and 17 figs. in the text.
- 1892 B
The nature of the shoulder girdle and clavicular arch in *Sauropterygia*.
Proc. Roy. Soc. Lond., li, pp. 119-151, with 15 figs. in the text.
- 1893 A
On a reptilian tooth with two roots.
Ann. and Mag. Nat. Hist. (6), xii, pp. 227-230, with 1 text fig.
Refers to Marsh's account of the teeth of *Triceratops* and describes and figures the two-rooted tooth of *Nuthetes*.
- 1894 A
On *Euskelesaurus brownii* (Huxley).
Ann. and Mag. Nat. Hist. (6), xiv, pp. 317-340, with 7 figs. in the text.
- 1895 A
Researches on the structure, organization, and classification of the fossil *Reptilia*. Part IX, section 1. On the *Therosuchia*.
Philos. Trans. Roy. Soc. Lond., clxxxv, pt. B, pp. 987-1018, with pl. lxxxviii.
- Seeley, Harry G.**—Continued. 1895 B
Researches on the structure, organization, and classification of the fossil *Reptilia*. Part IX, section 5. On the skeleton in new *Cynodontia*, from the Karroo rocks.
Philos. Trans. Roy. Soc. Lond., clxxxvi, pp. 59-148, with 33 figs. in text.
- 1895 C
On *Thecodontosaurus* and *Palæosaurus*.
Ann. and Mag. Nat. Hist. (6), xv, pp. 144-163, with 10 figs. in the text.
- 1896 A
On a pyritous concretion from the Lias of Whitby, which appears to show the external form of the body of embryos of a species of *Plesiosaurus*.
Annual Report Yorkshire Philos. Soc. for 1895.
- 1898 A
Origin of *Mammalia*.
Science (2), viii, pp. 357-358.
Abstract of remarks made at International Congress of Zoologists at Cambridge, England, 4th meeting; proceedings, pp. 68-71.
- 1900 A
On an Anomodont reptile, *Aristodermus rütimeyeri* (Wiedersheim), from the Bunter sandstone, near Basel.
Quart. Jour. Geol. Soc., lvi, pp. 620-645, with 8 figs. in the text.
- Segond, L. A.** 1864 A
Comparaison morphologique des vertèbres du bassin et du sternum chez les oiseaux.
Jour. de l'Anat., Physiol., etc., i, pp. 602-623.
- 1865 A
Comparaison morphologique des vertèbres du bassin et du sternum chez les oiseaux.
Jour. de l'Anat., Physiol., etc., ii, pp. 36-56.
- 1873 A
Reptiles et batraciens classés d'après leurs affinités par rapport à cinq types dont les caractères sont empruntés aux parties les moins modifiables du squelette.
Jour. de l'Anat., Physiol., etc., ix, pp. 1-29.
- 1873 B
Des affinités squelettiques des poissons.
Jour. de l'Anat., Physiol., etc., ix, pp. 511-534; 607-627.
- Selenka, Emil.** 1869 A
Aves. Anatomischer Bau.
Bronn's Klassen und Ordnungen des Thier. Reichs, vi, pp. 1-90, pls.
This article deals with the osteology of birds.

- Selwyn, Alfred R. C.** 1872 A
On the discovery of reptilian foot-prints in Nova Scotia.
Geol. Magazine (1), ix, pp. 250-251.
- Semon, Richard.** 1899 A
Ueber die Entwicklung der Zahn-gebilde der Dipnoer.
Sitzungsber. Gesellsch. Morphol. u. Physiol. München, xv, pp. 75-85, with 4 text figs.
- Serres, M.** 1865 A
Deuxième note sur le squelette du *Glyptodon clavipes*.
Comptes rend. Acad. Sci. Paris, lxi, pp. 457-466.
- 1865 B.
Note sur le *Glyptodon ornatus*. De sa carapace et de ses rapports normaux avec le squelette; caractères différentiels des os du bassin avec ceux du *Glyptodon clavipes*.
Comptes rend. Acad. Sci. Paris, lxi, pp. 537-544; 665-670.
Translation in Ann. and Mag. Nat. Hist. (3), xvi, pp. 432-443.
- Shaler, N. S.** 1871 A
The time of the mammoths.
Amer. Naturalist, iv, pp. 148-166.
- 1871 B
Note on the occurrence of the remains of *Tarandus rangifer*, Gray, at Big Bone Lick, Kentucky.
Proc. Boston Soc. Nat. Hist., xiii, p. 167.
- 1876 A
On the age of the bison in the Ohio Valley.
Mem. Kentucky Geol. Surv., i, pp. 232-236, with 1 diagrammatic section.
This paper forms Appendix II to J. A. Allen's memoir, The American Bisons, and was reprinted in Mem. Mus. Comp. Zool., iv, pp. 232-236.
- Shepard, Charles Upham.** 1867 A
On the supposed tadpole nests, or imprints made by *Batrachoides nidificans* (Hitchcock), in the red shale of the New Red sandstone of South Hadley, Mass.
Amer. Jour. Sci. (2), xliii, pp. 99-104.
- Sherborn, C. D.**
See **Woodward, A. S.**, and **Sherborn, C. D.**
- Shufeldt, R. W.** 1881 A
On the ossicle of the antibrachium as found in some North American *Falconidae*.
Bull. Nuttall Ornithological Club, vi, pp. 197-203.
- Shufeldt, R. W.**—Continued. 1881 B
Osteology of the North American *Tetraonidae*.
Bull. U. S. Geol. and Geog. Surv., F. V. Hayden, vi, pp. 309-350, with pls. vii-xiv.
Also, with little change in Ann. Rep. U. S. Geol. and Geog. Surv. for 1878 (1883), pp. 653-700, with pls. v-xiii, and 16 figs. in the text.
- 1881 C
Osteology of *Lanius ludovicianus excubitorides*.
Bull. U. S. Geol. and Geog. Surv., F. V. Hayden, vi, pp. 351-359, with pl. xiv.
Also, in Ann. Rep. U. S. Geol. and Geog. Surv. for 1878 (1883), pp. 719-725, with pl. xiv.
- 1881 D
Osteology of *Speotyto cunicularia*, var. *hypogæa*.
Bull. U. S. Geol. and Geog. Surv., F. V. Hayden, vi, pp. 87-117, with pls. i-iii.
Also, with little change, in Annual Report U. S. Geol. and Geog. Surv. for 1878 (1883), pt. i, pp. 593-620, with pls. i-iii.
- 1881 E
Osteology of *Eremophila alpestris*.
Bull. U. S. Geol. and Geog. Surv., F. V. Hayden, vi, pp. 119-147, with pl. iii-iv.
Also in Annual Report U. S. Geol. and Geog. Surv. for 1878 (1883), pp. 627-650, with pl. iv.
- 1883 A
Observations upon the osteology of *Podasocys montanus*.
Jour. Anat. and Physiol., xviii, pp. 86-102, with pl. v.
- 1883 B
Remarks on the osteology of *Phalacrocorax bicristatus*.
Science, ii, pp. 640-642, with 3 figs.
For discussion of this paper see Jeffries, J. A., Science, ii, p. 739, and iii, p. 59.
- 1883 C
Osteology of the *Cathartidae*.
Twelfth Annual Report U. S. Geol. and Geog. Surv., F. V. Hayden, 1878 (1883), Pt. i, pp. 728-786, with pls. xv-xxiv, and many figs. in the text.
- 1884 A
Osteology of *Numerius longirostris*, with notes upon the skeleton of other American *Limicolæ*.
Jour. Anat. and Physiol., xix, pp. 51-82, with pls. iv and v.
- 1885 A
Contribution to the comparative osteology of the *Trochilidae*, *Caprimulgidae*, and *Cypselidae*.
Proc. Zool. Soc. Lond., 1885, pp. 886-915, with pls. lvi-lix and 6 woodcuts in the text.

Shufeldt, R. W.—Continued. 1885 B

The osteology of *Amia calva*, including certain special references to the skeleton of Teleosteans.

Report U. S. Commissioner of Fish and Fisheries, 1883, pp. 747-878, pls. i-xiv.

Part I consists of a translation of Sagemehl's paper on *Amia*. Part II describes osteology of *Amia*, and portions of that of *Micropterus* and *Albula*.

1886 A

Additional notes upon the anatomy of the *Trochilidæ*, *Caprimulgidæ*, and *Cypselidæ*.

Proc. Zool. Soc. Lond., 1886, pp. 501-503, with 6 figs. in the text.

1886 B

Contributions to the anatomy of *Geococcyx californianus*.

Proc. Zool. Soc. Lond., 1886, pp. 466-491, with pls. xlii-xlv.

1886 C

Osteology of *Conurus carolinensis*.

Jour. Anat. and Physiol., xx, pp. 407-425, with pls. x and xi.

1888 A

Contributions to the comparative osteology of arctic and subarctic water birds.

Jour. Anat. and Physiol., xxiii, pp. 1-39, pls. i-v.

1888 B

Osteology of *Porzana carolina* (the Carolina rail).

Jour. Compar. Med. and Surg., ix, pp. 231-248, with 7 figs. in the text.

1888 C

Observations upon the morphology of *Gallus bankiva* of India.

Jour. Compar. Med. and Surg., ix, pp. 343-376, with 30 figs. in the text.

1888 D

On the skeleton in the genus *Sturnella*, with osteological notes upon other North American *Icteridæ* and the *Corvidæ*.

Jour. Anat. and Physiol., xxii, pp. 309-350, with pls. xiv, xv.

1888 E

Observations upon the osteology of the order *Tubinares* and *Steganopodes*.

Proc. U. S. Nat. Mus., xi, pp. 253-315, with 43 figs. in the text.

1889 A

Observations upon the osteology of the North American *Anseres*.

Proc. U. S. Nat. Mus., xi, pp. 215-251, with 30 figs. in the text.

Shufeldt, R. W.—Continued. 1889 B

On the comparative osteology of arctic and subarctic water birds.

Jour. Anat. and Physiol., xxiii, pp. 165-186, pls. vii-xi; 400-427, text figs. 17; 537-558, text figs. 1-8.

This paper is a continuation of Shufeldt, 1888 A.

1889 C

Contributions to the comparative osteology of arctic and subarctic water birds.

Jour. Anat. and Physiol., xxiv, pp. 89-117, pls. vi-viii, and 13 figs. in the text.

A continuation of Shufeldt, 1889 B. Treats of *Fraterculinæ*, *Fratercola*, *Lunda*, *Uria*, and the *Alcidæ*.

1890 A

Contributions to the comparative osteology of arctic and subarctic water birds.

Jour. Anat. and Physiol., xxiv, pp. 169-187, pls. xi, xii, and 2 text figs.; 543-566, with 17 text figs.

1890 B

Contributions to the comparative osteology of arctic and subarctic water birds.

Jour. Anat. and Physiol., xxv, pp. 60-77.

A continuation of Shufeldt, 1890 A.

1890 C

On the affinities of *Hesperornis*.

Nature, xliii, p. 176.

1891 A

On a collection of fossil birds from the Equus beds of Oregon.

Amer. Naturalist, xxv, pp. 359-362.

A general account of Silver Lake, Oregon, and of fossil remains there found.

1891 B

Fossil birds from the Equus beds of Oregon.

Amer. Naturalist, xxv, pp. 818-821.

See also The Auk, 1891, viii, pp. 365-368.

A list of 51 species, with remarks on some of the most interesting.

1891 C

Contributions to the comparative osteology of arctic and subarctic water birds.

Jour. Anat. and Physiol., xxv, pp. 509-525, pls. xi and xii, with 4 figs. in the text.

Continuation and conclusion of Shufeldt, 1890 B.

1892 A

A study of the fossil avifauna of the Silver Lake region, Oregon.

Proc. Amer. Assoc. Adv. Sci. 40th meeting. Washington, 1891, p. 286. Abstract.

- Shufeldt, R. W.**—Continued. 1892 B
Creccoides osbornii.
 In Cope's report on palæontology of Texas,
 3d Annual Report Geol. Surv. Texas, for 1891.
 Austin, 1892, pp. 253-255.
- 1892 C
 Concerning the taxonomy of the
 North American *Pygopodes*, based upon
 their osteology.
 Jour. Anat. and Physiol., xxvi, pp. 199-203.
- 1892 D
 A study of the avifauna of the Equus
 beds of the Oregon Desert.
 Jour. Acad. Nat. Sci., Phila., ix, pp. 389-425,
 pls. xv-xvii.
- 1893 A
 Comparative osteological notes on the
 extinct bird *Ichthyornis*.
 Jour. Anat. and Physiol., xxvii, pp. 336-342.
- 1894 A
 Osteology of certain cranes, rails, and
 their allies, with remarks upon their
 affinities.
 Jour. Anat. and Physiol., xxix, pp. 21-34,
 with 3 figs.
- 1894 B
 On cases of complete fibulæ in exist-
 ing birds.
 The Ibis (6), vi, pp. 361-366, with 2 figs. in
 the text.
- 1894 C
 Notes on the *Steganopodes* and on
 fossil birds' eggs.
 The Auk, xi, pp. 337-339.
- 1894 D
 On the affinities of the *Steganopodes*.
 Proc. Zool. Soc. Lond., 1894, pp. 160-162.
- 1897 A
 On fossil bird bones obtained by ex-
 peditions of the University of Pennsyl-
 vania from the bone caves of Tennessee.
 Amer. Naturalist, xxxi, pp. 645-650.
 All are of existing species and yet living in
 that region.
- 1897 B
 On the feathers of "*Hesperornis*."
 Nature, lvi, p. 30.
- 1899 A
 Observations on the classification of
 birds.
 Ann. and Mag. Nat. Hist. (7), iv, pp. 101-111,
 with 2 figs. in the text.
- 1900 A
 The osteology of *Vulpes macrotis*.
 Jour. Acad. Nat. Sci. Phila. (2), xi, pp. 395-418,
 with pls. xxii, xxiii.
- Shurtleff, N. B.** 1846 A
 Remarks on the skeleton of *Masto-
 don giganteus* found in Newburg, Orange
 County, N. Y.
 Proc. Boston Soc. Nat. Hist., ii, pp. 96-98.
- Sickler, F. K. L.** 1835 A
 Fährten unbekannten Thiere im
 Sandsteine bei Hildburghausen.
 Neues Jahrb. Mineral., etc., 1835, pp. 230-232.
 This is followed by remarks on the fossil
 tracks by H. G. Bronn.
- Siebenrock, Friedrich.** 1892 A
 Zur Kenntniss des Kopfskelettes der
 Scincoiden, Anguiden, und Gerrhosaur-
 iden.
 Annalen k. k. naturh. Hofmuseums Wien,
 vii, pp. 163-195, with pls. xi, xii.
- 1893 A
 Das Skelet von *Uroplates fimbriatus*
 Schneid.
 Annalen k. k. naturh. Hofmuseums Wien,
 viii, pp. 517-536, with pl. xiv and 2 figs. in the
 text.
- 1893 B
 Das Skelet von *Brookesia superciliaris*
 Kuhl.
 Sitzungsber. k. p. Akad. Wissensch. Wien,
 math.-naturw. Cl., cii, pp. 1-48, with pls. i-iv.
- 1894 A
 Das Skelet der *Lacerta simonyi*, und
 der Lacertidenfamilie überhaupt.
 Sitzungsber. k. p. Akad. Wissensch. Wien,
 math. naturw. Cl., ciii, pp. 205-292, pls. i-iv.
- 1894 B
 A contribution to the osteology of
 the head of *Hatteria*.
 Ann. and Mag. Nat. Hist. (6), xlii, pp. 297-
 311, with pl. xiv.
 Translated from Sitzungsber. k. p. Akad.
 Wissensch. Wien, math. naturw. Cl., cii, Abth.
 i, 1893, pp. 250-268, pl. i.
- 1895 A
 Zu Kenntniss des Rumpfskeletes der
 Scincoiden, Auguiden und Gerrho-
 sauriden.
 Annalen k. k. naturh. Hofmuseums Wien,
 x, pp. 18-41, with pl. iii and 4 figs. in the text.
 Appended is a list of 59 books and papers
 bearing on the osteology of the *Lacertilia*.
- 1895 B
 Das Skelet der *Agamidæ*.
 Sitzungsber. k. p. Akad. Wissensch. Wien,
 math.-naturw. Cl., Abth. i, civ, pp. 1-108, with
 pls. i-vi.
 This work includes a list of 67 papers on the
 subject treated.

Siebenrock, Friedrich—Cont'd. 1897 A

Das Kopfskelet der Schildkröten.

Sitzungsber. k. p. Akad. Wissensch. Wien., math.-naturw. Cl., cvi, pp. 1-84, with pls. i-vi.

This paper includes a list of 61 works on the subject.

1898 A

Ueber den Bau und die Entwicklung des Zungenbein-Apparates der Schildkröten.

Annalen k. k. naturh. Hofmuseums Wien, xiii, pp. 424-436, with pls. xvii, xviii and 2 figs. in the text.

Appended is a list of 22 works bearing on the subject.

Silliman, Benj., Sr. 1835 A

Vertebral bone of a mastodon.

Amer. Jour. Sci., xxvii, p. 165.

1837 A

Bird tracks at Middletown, Conn., in the New Red sandstone.

Amer. Jour. Sci., xxxi, p. 165.

This is an extract from a letter to the editor from an unnamed correspondent. No species or genera are named.

Silliman, Benj., Jr. 1868 A

On the existence of the mastodon in the deep-lying gold placers of California.

Amer. Jour. Sci. (2), xlv, pp. 378-381.

Sirodot, S. 1876 A

Les éléphants du mont Dol; essai d'organogénie du système des dents machelières du mammouth.

Comptes rend. Acad. Sci., Paris, lxxxii, pp. 734-736, 822-824, 902-905.

1876 B

Les éléphants du mont Dol. Dentition du mammouth, distinction des molaires inférieure, et supérieurs droits et gauches.

Comptes rend. Acad. Sci., Paris, lxxxii, pp. 1065-1068.

Sismonda, Eugenio. 1849 A

Descrizione dei pesci e dei crostacei fossili nel Piemonte.

Mem. della Reale Accad. delle Scienze di Torino (2), x, pp. 1-88, with pls. i-iii.

Sixta, V. 1900 A

Vergleichend-osteologische Untersuchungen über den Bau des Schädels von Monotremen und Reptilien.

Zoolog. Anzeiger, xxiii, pp. 213-229.

See also J. F. Van Bemmelen in Zoolog. Anzeiger, xxiii, p. 449.

Skilton, Dr. 1858 ACommunication upon *Equus major* found near Troy, N. Y.

Proc. Boston Soc. Nat. Hist., vi, pp. 303-304.

Slade, D. D. 1888 A

On certain vacuities or deficiencies in the crania of mammals.

Bull. Mus. Comp. Zool., xiii, pp. 241-246, with pls. i and ii.

1890 A

Osteological notes.

Science, xvi, pp. 332-333.

Treats of jugal arch of *Mammalia*.

1891 A

Osteological notes.

Science, xvii, pp. 317-318.

Treats of the jugal arch of the *Primates*.

1891 B

Osteological notes.

Science, xviii, pp. 53-54.

Treats of jugal arch of *Primates*.

1892 A

Osteological notes.

Science, xix, pp. 203-204.

Jugal arch of *Insectivora*.

1892 B

Osteological notes.

Science, xx, p. 46.

Discusses jugal arch of the *Rodentia*.

1893 A

Osteological notes.

Science, xxi, pp. 78-79.

Discusses jugal arch of the *Ungulata*.**Smith, Horace P.** 1887 A*Bison latifrons*. Leidy.

Jour. Cincinnati Soc. Nat. Hist., x, pp. 19-24, pl. i.

Smith, J. 1895 A

Notes on a peculiarity in the form of the mammalian tooth.

Proc. Roy. Soc. Edinburgh, xx, pp. 336-346, with 1 page of 13 figs.

Smith, J. Augustine. 1846 A

Central cavity of the mastodon.

Amer. Quart. Jour. Agricult. and Sci., iii, pp. 19-22.

The word "central" in the caption of this paper is probably a misprint for cerebral.

Smith, J. Lawrence. 1844 A

Communication on some fossil bones.

Amer. Jour. Sci. (1), xlvii, pp. 116-117.

On some bones from vicinity of Charleston, S. C. Species undetermined.

Snow, F. H. 1878 A

On the dermal covering of a mosa-sauroid reptile.

Trans. Kansas Acad. Sci., vi, pp. 54-58, with 1 pl. and 1 text-fig.

- Snow, F. H.**—Continued. 1887 A
On the discovery of a fossil bird track in the Dakota sandstone.
Trans. Kansas Acad. Sci., x, pp. 3-6, with 1 fig. in the text.
Regarded as possibly tracks of *Ichthyornis*.
- Sollas, W. J.** 1881 A
On a new species of *Plesiosaurus* (*P. conybeari*) from the lower Lias of Charmouth, with observations on *P. megacephalus* Stutchbury and *P. brachycephalus* Owen.
Quart. Jour. Geol. Soc., xxxvii, pp. 440-481, with pls. xxiii and xxiv and 14 woodcuts.
- Speir, Francis.**
See **Osborn, Scott, and Speir; Osborn and Speir.**
- Stainier, X.** 1894 A
Un *Spiraxis* nouveau du Dévonien belge.
Bull. Soc. Belge Géol., Paléont., Hydrol., viii, Mém., pp. 23-28, with 1 text fig.
- Stannius, H.** 1842 A
Ueber das Gebiss des Lama.
Archiv Anat. Physiol. u. wissenschaft. Med., Jahrg. 1842, pp. 388-389.
- 1842 B
Ueber Gebiss und Schädel des Walrosses unter Berücksichtigung der Frage, ob die Verschiedenheiten im Baue des Schädels zur Unterscheidung mehrerer Arten der Gattung *Trichechus* berechtigen.
Archiv Anat. Physiol. u. wissenschaft. Med., 1842, pp. 390-413.
- 1846 A
Bemerkungen über das Verhältniss der Ganoïden zu den Clupeïden, insbesondere zu *Butirinus*.
Rostock, 1846, 8vo, pp. 1-20.
- 1854 A
Handbuch der Zootomie von Siebold und Stannius. Zweiter Theil. Die Wirbelthiere von Hermann Stannius. Erstes Buch. Die Fische.
Zweite Auflage, Berlin, 1854. Pp. 1-279.
- 1856 A
Handbuch der Zootomie von Siebold und Stannius. Zweiter Theil. Wirbelthiere von Hermann Stannius. Zweites Buch. Zootomie der Amphibien.
Zweite Auflage, Berlin, 1856. Pp. 1-271.
- Starks, Edwin Chapin.** 1899 A
The osteological characters of the fishes of the suborder *Percesoces*.
Proc. U. S. Nat. Mus., xxii, pp. 1-10, with pls. i-iii.
The osteology of *Atherinopsis californiensis*, *Mugil cephalus*, and *Sphyræna argentea* is described and illustrated.
- Stecker, Anton.** 1877 A
Zur Kenntniss des Carpus und Tarusus bei *Chamaeleon*.
Sitzungsber. k. p. Akad. Wissensch. Wien. mat.-naturw. Cl., lxxv, pt. i, pp. 7-16, with pls. i, ii.
- Steenstrup, Jap.** 1855 A
Et Bidrag til Geirfuglens, *Alca impennis* Lin., Naturhistorie, og særligt til Kundshaben om dens tidligere Udbredningskreds.
Vidensk. Meddel. naturh. Forening Kjøbenhavn, 1855, pp. 33-118, with 1 map and 1 pl.
- Stehlin, H. G.** 1893 A
Zur Kenntniss der postembryonalen Schädelmetamorphosen bei Wiederkauern. Inauguraldissertation, Basel.
4to, Basel, 1893, pp. 1-81, with pls. i-iv.
- 1899 A
Ueber die Geschichte des Suiden-Gebisses. Erster Theil.
Abhandl. schweizer. paläontolog. Gesellsch., xxvi, pp. i-vii; 1-336.
- Steinmann, Gustav, und Döderlein, Ludwig.** 1890 A
Elemente der Paläontologie.
Pp. i-xix; 1-848 with 1,030 figs. in the text.
Leipzig, Wilhelm Engelmann.
Pp. 516-827 treat on the *Vertebrata*.
- Steitz, Auguste.** 1870 A
[Exhibition of molar tooth of *Elephas primigenius* from Helena, Montana.]
Trans. Acad. Sci. St. Louis, iii, p. xxxii.
- Stejneger, Leonhard.** 1883 A
Contributions to the natural history of the Commander Islands. No. 1. Notes on the natural history, including descriptions of new cetaceans.
Proc. U. S. Nat. Mus., vi, pp. 58-89.
Contains an account of Steller's sea-cow (*Rytina gigas*) and measurements of skulls establishing the existence of differences in the skulls of the two sexes.
- 1884 A
Contributions to the natural history of the Commander Islands. No. 2.

Stejneger, Leonhard—Continued.

Investigations relating to the date of the extermination of Steller's sea-cow.
Proc. U. S. Nat. Mus., vii, pp. 181-189.

1885 A

Natural history of birds.

The Standard Natural History, edited by John Sterling Kingsley, vol. iv, pp. 1-195, with figs. 1-93; 368-441, with figs. 171-221; 458-547, with figs. 228-273.

1886 A

On the extermination of the great northern sea-cow.

Jour. Amer. Geog. Soc., New York, xviii, pp. 317-328.

1887 A

How the great northern sea-cow (*Rytina*) became exterminated.

Amer. Naturalist, xxi, pp. 1047-1054.

1893 A

Skeletons of Steller's sea-cow preserved in the various museums.

Science, xxi, p. 81.

Stejneger, L., and Lucas, F. A. 1890 A

Contributions to the natural history of the Commander Islands. A.—Contributions to the history of Pallas's cormorant.

Proc. U. S. Nat. Mus., xii, pp. 83-94, with pls. ii-iv.

Steller, Georg Wilhelm. 1751 A

De bestiis marinis.

Novi Commentarii Acad. Scient. Imp. Petropolitane, ii, pp. 289-398.

The earliest account of the arctic sea-cow, containing descriptions of its anatomy, habits, etc. The portion of this work devoted to the sea-cow includes pp. 294-300, with pl. xiv.

Stephan, Pierre. 1900 A

Recherches histologiques sur la structure du tissu osseux des poissons.

Bull. Scient. France et Belgique, xxxiii, pp. 281-429, with pls. i-iii.

With a bibliographical index of 140 entries.

Sternberg, Charles. 1899 A

The first great roof.

Popular Science, xxxiii, pp. 126-127, with 1 text fig.

Describes the carapace of *Protostega gigas*.

Stevenson, W. D. 1884 AThe "man-eater shark," *Carcharodon carcharias*.

Amer. Naturalist, xviii, pp. 940-941, with 1 pl. and 1 woodcut.

Stewart, Alban. 1897 ARestoration of *Oreodon culbertsonii*, Leidy.

Kansas Univ. Quarterly, vi, pp. 13-14, with pl. i.

Stewart, Alban—Continued. 1897 BNotes on the osteology of *Bison antiquus*.

Kansas Univ. Quarterly, vi, pp. 127-135, with pl. xvii and 1 fig. in the text.

The species here described as *B. antiquus* is now assigned to *B. occidentalis* Lucas.

1898 A

A contribution to the knowledge of the ichthyic fauna of the Kansas Cretaceous.

Kansas Univ. Quarterly, vii, pp. 21-29, with pls. i and ii.

1898 B

Individual variations in the genus *Xiphactinus* Leidy.

Kansas Univ. Quarterly, vii, A, pp. 115-119, with pls. vii-x.

1898 C

Some notes on the genus *Saurodon* and allied species.

Kansas Univ. Quarterly, vii, A, pp. 177-186, with pls. xiv-xvi.

1898 D

A preliminary description of seven new species of fish from the Cretaceous of Kansas.

Kansas Univ. Quarterly, vii, A, pp. 191-196, with pl. xvii and text figs. 1-3.

1899 A

A preliminary description of the opercular and other cranial bones of *Xiphactinus* Leidy.

Kansas Univ. Quarterly, viii, A, pp. 19-21.

1899 B

Pachyrhizodus minimus, a new species of fish from the Cretaceous of Kansas.

Kansas Univ. Quarterly, viii, A, pp. 37-38, with 1 fig. in the text.

1899 C

Notice of three new Cretaceous fishes, with remarks on the *Saurodontidae* Cope.

Kansas Univ. Quarterly, viii, A, pp. 107-112.

1899 D

Notes on the osteology of *Anogmus polymicrodus* Stewart.

Kansas Univ. Quarterly, viii, A, pp. 117-121, with pl. xxxi.

1899 E

Leptichthys, a new genus of fishes from the Cretaceous of Kansas.

Amer. Geologist, xxiv, pp. 78-79.

1900 A

Teleosts of the Upper Cretaceous.

Univ. Geol. Surv., Kansas, vi, pp. 257-403, with pls. xxxiii-lxxiii, and 6 figs. in the text.

- Stewart, Thos. P.** 1828 A
Mammoth.
Amer. Jour. Sci. (1), xiv, pp. 188-189.
- Stickler, L.** 1899 A
Ueber den microscopischen Bau der Faltenzähne von *Eryops megacephalus* Cope.
Palæontographica, xlv, pp. 85-94, with pls. xi, xii.
- Stirrup, Mark.** 1893 A
The true horizon of the mammoth.
Geol. Magazine (3), x, pp. 107-111.
- 1894 A
The true horizon of the mammoth.
Geol. Magazine (4), i, pp. 80-82.
- Stock, Thos.** 1881 A
On some British specimens of the "Kammplatten" or "Kammleisten" of Professor Fritsch.
Ann. and Mag. Nat. Hist. (5), viii, pp. 90-95, with pl. vi.
- 1881 B
On the discovery of a nearly entire *Rhizodus* in the Wardie shales.
Geol. Magazine (2), viii, pp. 77-78.
- 1882 A
Further observations on Kammplatten, and note on *Ctenoptychius pectinatus*.
Ann. and Mag. Nat. Hist. (5), ix, pp. 253-257, with pl. viii.
- 1882 B
Notice of some discoveries recently made in Carboniferous vertebrate palæontology.
Nature, xxvii, p. 22.
Records finding of "*Dyplogodus*" teeth with spines quite different from those of *Pleuracanthus*. Also *Tristychius* associated with *Hybodus*.
- 1883 A
On the structure and affinities of the genus *Tristychius* Agass.
Ann. and Mag. Nat. Hist. (5), xii, pp. 177-190, with pl. vii.
- Strauch, Alexander.** 1890 A
Bemerkungen über die Schildkröten-sammlung im Zoologischen Museum der K. Akademie der Wissenschaften zu St. Petersburg.
Mém. Acad. Imp. Sci. St. Pétersbourg (7), xxxviii, No. 2, pp. 1-43.
- Struckmann, C.** 1880 A
Ueber die Verbreitung des Renthiers in der Gegenwart und in älterer Zeit nach Maassgabe seiner fossilen Reste
- Struckmann, C.—Continued.**
unter besonderer Berücksichtigung der deutschen Fundorte.
Zeitschr. deutsch. geol. Gesellsch., xxxii, pp. 728-773.
- Strüver, Johannes.** 1864 A
Die fossilen Fische aus dem Keuper-sandstein von Coburg.
Zeitschr. deutsch. geol. Gesellsch., xvi, pp. 303-330, with pl. xiii.
Contains discussion of *Semionotus* and *Dic-tyopyge*.
- Struthers, John.** 1871 A
On some points in the anatomy of a great fin-whale (*Balænoptera musculus*).
Jour. Anat. and Physiol., i, pp. 107-125.
Discusses the rudimentary hind limbs, the pelvic bones, ribs, sternum, and cervical vertebræ.
- 1872 A
On the cervical vertebræ and their articulations in fin-whales.
Jour. Anat. and Physiol., vii, pp. 1-55, pls. i, ii.
- 1881 A
On the bones, articulations, and muscles of the rudimentary hind limbs of the Greenland right-whale (*Balæna mysticetus*).
Jour. Anat. and Physiol., xv, pp. 141-176, 301-321, pls. xiv-xvii.
- 1885 A
On the rudimentary hind limb of *Megaptera longimana*.
Amer. Naturalist, xix, pp. 124-125.
Abstract of paper read at Montreal before Brit. Assoc. Adv. Sci., 1884.
- 1885 B
On the development of the foot of the horse.
Nature, xxxii, pp. 560-561.
A short note.
- 1888 A
On some points in the anatomy of a *Megaptera longimana*.
Jour. Anat. and Physiol., xxii, pp. 240-282, 441-460, 629-654, pls. x-xii; xxiii, pp. 124-163, pl. vi; 308-335, 358-373.
The last two installments of this paper belong to the year 1889. The first installment, not above cited, is found in vol. xxiii, pp. 109-124, and deals with the soft portions of the anatomy.
- 1893 A
On the rudimentary hind limb of a great fin-whale (*Balænoptera musculus*) in comparison with those of the hump-

Struthers, John—Continued.

back whale and the Greenland right-whale.

Jour. Anat. and Phys., vol. xxvii, with pls. xvii-xx.

1893 B

On the development of the bones of the foot of the horse, and of digital bones generally; and on a case of polydactyly in the horse.

Jour. Anat. and Physiol., xxvii, pp. 51-62, with pl. 1.

1895 A

Carpus of the Greenland right-whale (*Balæna mysticetus*) and of fin-whales.

Jour. Anat. and Physiol., xxix, pp. 145-187, with pls. ii-iv.

Stutchbury, S.

See **Riley and Stutchbury**.

Swallow, G. C.

1866 A

Notice of remains of the horse in the altered drift of Kansas.

Trans. Acad. Sci. St. Louis, ii, p. 418.

The species not distinguishable by the writer from the common horse.

Swinnerton, H. H.

See **Howes and Swinnerton**.

T. R. D.

1839 A

Fossil shells and bones (*Megatherium*) near Savannah, Ga.

Amer. Jour. Sci., i, 1839, p. 380.

T. R. J.

1889 A

Human relics and bones of mastodon found in association.

Geol. Magazine (3), vi, p. 192.

Said to have been found in Attica, Wyoming County, N. Y.

Taeker, Julius.

1892 A

Zur Kenntniss der Odontogenese bei Ungulaten.

Pp. 27, with 4 pls. Dorpat, 1892.

Teller, Friedrich.

1884 A

Neue Anthracotherienreste aus Südsteiermark und Dalmatien.

Beiträge Paläontologie Oesterreich-Ungarns und des Orients (Mojsisovics und Neumayer), iv, pp. 45-134, with pls. xi-xiv.

On pages 47, 48 is a list of papers which treat of the genus *Anthracotherium*.

1891 A

Ueber den Schädel eines fossilen Dipnoërs, *Ceratodus sturii*, nov. spec., aus den Schichten der oberen Trias der Nordalpen.

Abhandl. k. k. geol. Reichsanstalt Wien., xv, Heft 3, pp. 1-39, with pls. i-iv.

On pp 4-5 is found a long list of works on the genus *Ceratodus*.

Thacher, James K.

1877 A

Median and paired fins, a contribution to the history of vertebrate limbs.

Trans. Connecticut Acad. Arts and Sci., iii, pp. 281-310, pls. xlix-lx.

1887 B

Ventral fins of ganoids.

Trans. Connecticut Acad. Arts and Sci., iv, pp. 233-242, pls. i, ii.

Thévenin, Armand.

1896 A

Mosasauriens de la craie grise de Vaux-Éclusier près Péronne (Somme).

Bull. Soc. Géol. France (3), xvii, pp. 900-911, with pls. xxix, xxx, and 8 figs. in the text.

1896 B

Nouveaux mosasauriens trouvés en France.

Comptes rend. Acad. Sci. Paris, cxxiii, pp. 1319-1320.

Thilenius, G.

1894 A

Ueber Sesambeine fossiler Säugetiere.

Anatom. Anzeiger, x, pp. 42-48, with 2 figs.

Thomas, Oldfield.

1888 A

On the homologies and succession of the teeth in the *Dasyuridae*, with an attempt to trace the history of the evolution of mammalian teeth in general.

Philos. Trans. Roy. Soc. Lond., clxxviii, pp. 443-462; pls. 27, 28.

Reviewed by M. Schlosser in Archiv f. Anthrop., xix, pp. 115-116.

1888 B

On a new and interesting annectant genus of *Muridae*, with remarks on the relations of the Old and New-World members of the family.

Proc. Zool. Soc. Lond., 1888, pp. 130-135, with pl. v.

1890 A

Remarks on Dr. Schosser's "Ueber die Deutung des Milchgebisses der Säugetiere."

Biolog. Centralbl., x, pp. 216-219.

1892 A

On the species of *Hyracoides*.

Proc. Zool. Soc. Lond., 1892, pp. 50-76, with pl. iii.

1892 B

Notes on Dr. W. Küenthal's discoveries in mammalian dentition.

Ann. and Mag. Nat. Hist. (6), ix, pp. 308-313.

1896 A

On the genera of rodents; an attempt to bring up to date the current arrangement of the order.

Proc. Zool. Soc. Lond., 1896, pp. 1012-1028.

See for remarks on this paper Dr. T. S. Palmer in Science, vi, p. 103.

- Thomas, O., and Lydekker, R.** 1897 A
On the number of grinding teeth possessed by the manatee.
Proc. Zool. Soc. Lond., 1897, pp. 595-600, with pl. xxxvi.
- Thompson, D'Arcy W.** 1886 A
On the hind limb of *Ichthyosaurus*, and on the morphology of vertebrate limbs.
Jour. Anat. and Physiol., xx, pp. 532-535, with 2 text figs.
- 1890 A
On the systematic position of *Zeuglodon*.
Studies from the Museum of Zoology, University Coll., Dundee, No. 9, pp. 1-8, with 10 text figs.
- 1890 B
On the systematic position of *Hesperornis*.
Studies from the Museum of Zoology, University Coll., Dundee, No. 10, pp. 1-15, with 17 text figs.
- Thompson, James.** 1868 A
Note on the spines of *Gyracanthus*.
Trans. Geol. Soc. Glasgow, iii, pp. 130-133.
- 1870 A
On teeth and dermal structure associated with *Ctenacanthus*.
Report Brit. Assoc. Adv. Sci., 39th meeting, Exeter, 1869, pp. 102-103.
Regards *Ctenacanthus*, *Cladodus*, and *Diplo-dus* as representing one form.
- 1871 A
On *Ctenacanthus hybodontoides*, Egerton.
Trans. Geol. Soc. Glasgow, iv, pp. 59-62, with pls. ii, iii.
- Thompson, J. Arthur.** 1897 A
As regards dentitions—a notice of some new facts and theories.
Proc. Scottish Micros. Soc., ii, pp. 36-50.
- Thompson, Zadock.** 1850 A
An account of some fossil bones found in Vermont in making excavations for the Rutland and Burlington Railroad.
Amer. Jour. Sci. (2), ix, pp. 256-263, with 2 pages of cuts, 13 in number.
- 1853 A
History of Vermont, natural, civil, and statistical.
Appendix, pp. 5-64.
Contains description and figures of *Beluga vermontana* and an account of the finding of some remains of *Elephas primigenius* †.
- Thompson, Zadock—Continued.** 1859 A
A Vermont whale.
Edinb. New Philos. Jour., x, p. 299.
Records finding of *Beluga vermontana* at Charlotte, Vt., in 1849.
- Tims, H. W. Marett.** 1896 A
Notes on the dentition of the dog.
Anatom. Anzeiger, xi, pp. 537-546, with 5 figs.
Contains a list of papers written on the subject discussed, the teeth of mammals, with especial reference to the existence of "pre-milk" teeth.
- 1896 B
On the tooth-genesis in the *Canidae*.
Jour. Linn. Soc. Lond., Zool., xxv, pp. 445-480, with 8 figs. in the text.
Contains numerous references to the literature.
- Todd, Albert.** 1876 A
[Exhibition of tooth identified as that of *Mastodon angustidens*, found in Pike County, Mo.]
Trans. Acad. Sci. St. Louis, iii, p. cxcii.
- Toll, Eduard.** 1895 A
Die fossilen Eislager und ihre Beziehungen zu den Mammuthleichen.
Mém. Acad. Imp. Sci. St. Pétersbourg (7), xlii, No. 13, pp. 1-86, with pls. i-vii.
- Tomes, Charles S.** 1898 A
A manual of dental anatomy, human and comparative.
Fifth edition, 8vo, Philadelphia, 1898, pp. i-viii; 1-596, with figs. 1-273.
- Tomes, John.** 1850 A
On the structure of the dental tissues of the order *Rodentia*.
Philos. Trans. Roy. Soc. Lond., 1850, pp. 529-567, with pls. xliii-xlvi.
- Topinard, Paul.** 1892 A
De l'évolution des molaires et prémolaires chez les Primates et en particulier chez l'homme.
L'Anthropologie, Paris, 1892, pp. 641-710, with 8 figs.
Reviewed by M. Schlosser in Archiv f. Anthrop., xxiii, pp. 157-159.
- Tornier, Gustav.** 1886 A
Fortbildung und Umbildung des Ellbogengelenks während der Phylogenese der einzelnen Säugethiergruppen.
Morpholog. Jahrbuch, xii, pp. 407-413, with 2 woodcuts.
- 1888 A
Die Phylogenese des terminalen Segmentes der Säugethier-Hintergliedmassen.

Tornier, Gustav—Continued.

Morpholog. Jahrbuch, xiv, pp. 223-328, with pls. xi, xii.

"Die Begriffe, 'Fuss,' und 'terminales Segment der hinteren Gliedmassen' werden von mir als gleichwerthig angesehen."

1890 A

Die Phylogese des terminalen Segmentes der Säugethier-Hintergliedmassen.

Morpholog. Jahrbuch, xvi, pp. 401-483, with pls. xvii, xviii.

Toula, Franz.

1892 A

Zwei neue Säugethierfundorte auf der Balkanhalbinsel.

Sitzungsber. Cl. k. Akad. Wissensch. Wien. math.-naturw. ci, Abth. i, pp. 608-615, with plate.

Describes *Menodus ? rumeticus*, which is compared with *M. proutii* (Leidy).

1897 A

Phoca vindobonensis n. sp. von Nussdorf in Wien.

Beiträge Paläontologie Oesterreich-Ungarns und des Orients (Mojsisovics und Neumayer), xi, pp. 47-70, with pls. ix-xi.

This paper contains a bibliography and a list of the described fossil species of seals.

Toula, Franz, and Kail, J. A.

1885 A

Ueber einen Krokodil-Schädel aus den Tertiärablagerungen von Eggenburg in Niederrösterreich.

Denkschr. k. Akad. Wissensch. Wien, pp. 229-356, with 3 pls. and 3 text figs.

Traquair, R. H.

1867 A

Description of *Pygopterus greenocki* (Agassiz), with notes on the structural relations of the genera *Pygopterus*, *Amblypterus*, and *Eurynotus*.

Trans. Roy. Soc. Edinburgh, xxiv, pp. 701-713, with pl. xlv.

Describes of species now referred by A. S. Woodward to *Nematoptychius*.

1870 A

On the cranial osteology of *Polypterus*.

Jour. Anat. and Physiol., v, pp. 166-183, pl. vi.

1871 A

Notes on the genus *Phaneropleuron* (Huxley), with a description of a new species from the Carboniferous formation.

Geol. Magazine (1), viii, pp. 529-535, with pl. xiv and 1 fig. in the text.

For supplementary remarks see Geol. Magazine (1), ix, 1872, p. 271.

Traquair, R. H.—Continued. 1873 A

On a new genus of fossil fish of the order *Dipnoi*.

Geol. Magazine (1), x, pp. 552-555, with pl. xiv and 1 woodcut.

Describes new genus and species, *Ganorhynchus woodwardi*.

1875 A

On the structure and systematic position of the genus *Cheirolepis*.

Ann. and Mag. Nat. Hist. (4), xv, pp. 237-248, with pl. xvii.

1875 B

On some fossil fishes from the neighborhood of Edinburgh.

Ann. and Mag. Nat. Hist. (4), xv, pp. 258-268, with pl. xvi.

Describes and figures *Nemoptychius greenocki*, *Wardichthys*, n. g., and *Rhizodus hibberti*.

1875 C

On the structure and affinities of *Tristichopterus alatus* Egerton.

Trans. Roy. Soc. Edinburgh, xxvii, pp. 383-396.

1877 A

On the Agassizian genera *Amblypterus*, *Palæoniscus*, *Gyrolepis*, and *Pygopterus*.

Quart. Jour. Geol. Soc., xxxiii, pp. 548-578.

1877 B

The Ganoid fishes of the British Carboniferous formations. Part I. *Palæoniscidæ*.

Palæontographical Society, xxxi, pp. 1-60, pls. i-vii.

1877 C

On the structure of the lower jaw in *Rhizodopsis* and *Rhizodus*.

Ann. and Mag. Nat. Hist. (4), xix, pp. 299-305.

1878 A

On the genera *Dipterus* Sedgw. & Murch., *Palædaphus* Van Beneden and De Koninck, *Holodus* Pander, and *Cheirodus* McCoy.

Ann. and Mag. Nat. Hist. (5), ii, pp. 1-17, with pl. iii.

Describes the structure of *Dipterus* and places the genus in the *Dipnoi*. *Palædaphus* also belongs to the *Dipnoi*.

1879 A

On the structure and affinities of the *Platysomidæ*.

Trans. Roy. Soc. Edinburgh, xxix, pp. 343-391, with pls. iii-vi.

Review of this paper in Geol. Magazine (2), vii, pp. 318-321.

Traquair, R. H.—Continued. 1881 A
Report on the fossil fishes collected
by the Geological Survey of Scotland in
Eskdale and Liddesdale. Part I. *Ga-*
noides.

Trans. Roy. Soc. Edinburgh, xxx, pp. 15-71,
with pls. i-vi.

1881 B

On the cranial osteology of *Rhizo-*
dopsis.

Trans. Roy. Soc. Edinburgh, xxx, pp. 167-
179, with 3 figs. in the text.

1884 A

Remarks on the genus *Megalichthys*
Agassiz, with description of a new spe-
cies.

Geol. Magazine (3), i, pp. 115-121, plate v.

See also Proc. Roy. Phys. Soc. Edinburgh,
viii, pp. 67-77, with pl. iv.

1884 B

Description of a fossil shark (*Ctena-*
canthus costellatus) from the Lower Car-
boniferous rocks of Eskdale, Dumfries-
shire.

Geol. Magazine (3), i, pp. 3-8, with pl. ii.

1884 C

Notes on the genus *Gyracanthus*
Agassiz.

Ann. and Mag. Nat. Hist. (5), xiii, pp. 37-48.

1885 A

On a specimen of *Psephodus magnus*
Agassiz, from the Carboniferous lime-
stone of East Kilbridge, Lanarkshire.

Geol. Magazine (3), ii, pp. 337-344.

1885 B

On a specimen of *Psephodus magnus*
Agassiz, from the Carboniferous lime-
stone of East Kilbridge, Lanarkshire.

Trans. Geol. Soc. Glasgow, vii, pp. 392-402,
with pl. xvi.

1886 A

On *Harpacanthus*, a new genus of
Carboniferous selachian spines.

Ann. and Mag. Nat. Hist. (5), xviii, pp. 493-
496, with 2 figs. in the text.

1887 A

Notes on *Chondrosteus acipenseroides*
Agassiz.

Geol. Magazine (3), iv, pp. 248-257, with 5 figs.

Also in Proc. Roy. Phys. Soc. Edinburgh, ix,
pp. 349-361, 1887.

1888 A

Notes on Carboniferous *Selachii*.

Geol. Magazine (3), v, pp. 81-86; 101-104.

See also Proc. Roy. Phys. Soc. Edinburgh,
ix, pp. 412-421.

Discusses *Cladodontidae*, *Orodontidae*, *Cochlio-*
dontidae, *Petalodontidae*, and *Oracanthus*.

Traquair, R. H.—Continued. 1888 B
Notes on the nomenclature of the
fishes of the Old Red sandstone of Great
Britain.

Geol. Magazine (3), v, pp. 507-517.

1888 C

On the structure and classification of
the *Asterolepidae*.

Ann. and Mag. Nat. Hist. (6), ii, pp. 485-504,
with pls. xvii, xviii.

Also in Proc. Roy. Phys. Soc. Edinburgh, x,
pp. 23-46, pls. i, ii.

1889 A

Homosteus Asmuss compared with
Coccosteus Agassiz.

Geol. Magazine (3), vi, pp. 1-8, pl. i.

Also in Proc. Roy. Phys. Soc. Edinburgh, x,
pp. 47-57, with pl. iii.

1889 B

Note on the genera *Tristycanthus* and
Phychacanthus.

Geol. Magazine (3), vi, pp. 27-28.

1889 C

On the systematic position of the
"Dendrodont" fishes.

Geol. Magazine (3), vi, pp. 490-492.

1890 A

Notes on the Devonian fishes of Scau-
menac Bay and Campbelltown, in Can-
ada.

Geol. Magazine (3), vii, pp. 15-22.

1890 B

On *Phlyctænius*, a new genus of *Cocco-*
steidae.

Geol. Magazine (3), vii, pp. 55-60, with pl. iii.

See also Proc. Roy. Phys. Soc. Edinburgh, x,
pp. 227-235, 1891, for reprint, with *Phlyctænaspis*
substituted in the title for *Phlyctænius*.

1890 C

On the supposed pectoral limb in
Coccosteus decipiens.

Geol. Magazine (3), vii, p. 235.

A reply to Prof. V. Koenen, Geol. Magazine,
vii, p. 191.

1890 D

On the structure of *Coccosteus decipiens*
Agassiz.

Ann. and Mag. Nat. Hist. (6), v, pp. 125-136,
with pl. x.

Also in Proc. Roy. Phys. Soc. Edinburgh,
1889-90, pp. 211-224, pl. x.

1890 E

Note on *Phlyctænius*, a new genus of
Coccosteidae.

Geol. Magazine (3), vii, p. 144.

A short note proposing *Phlyctænaspis* to re-
place *Phlyctænius*, regarded as being preoccu-
pied by *Phlyctænum* of Zittel.

- Traquair, R. H.—Continued.** 1890 F
List of the fossil *Dipnoi* and *Ganoidei* of Fife and the Lothians.
Proc. Roy. Soc. Edinburgh, xvii, pp. 385-400.
- 1891 A
Review of A. S. Woodward's "Catalogue of the fossil fishes in the British Museum."
Geol. Magazine (3), viii, pp. 123-129.
- 1891 B
On the structure of *Coccosteus decipiens*, Agassiz.
Proc. Roy. Phys. Soc. Edinburgh, x, pp. 211-224, with pl. x.
See Traquair, R. H., 1890 D.
- 1893 A
Notes on the Devonian fishes of Campbelltown and Scaumenac Bay.
Geol. Magazine (3), x, pp. 145-149, with 1 text fig.
Treats of *Protodus jexi*, *Doliodus problematicus*, *Cheiracanthus costellatus*, *Cephalaspis campbelltonensis*, *Cephalaspis jexi*, and *Phlyctenaspis acadica*.
- 1893 B
Fauna der Gaskohle und der Kalksteine des Perm-formations Böhmens.
Geol. Magazine (3), x, pp. 175-178.
Review of Prof. Fritsch's work with title given above.
- 1893 C
Notes on the Devonian fishes of Campbelltown and Scaumenac Bay in Canada. No. 3.
Geol. Magazine (3), x, pp. 262-267.
Describes *Scaumenacia curta*, *Coccosteus canadensis*, *Gyrolepis quebecensis*, and *Eusthenopteron foordii*.
See notice of this paper in Amer. Naturalist, vol. xxvii, p. 817.
- 1893 D
Notes on the Devonian fishes of Campbelltown and Scaumenac Bay in Canada. Parts 1 and 2.
Proc. Roy. Phys. Soc. Edinburgh, xii, pp. 111-125.
Contains descriptions of the species referred to under Traquair, R. H., 1893 A, and Traquair, R. H., 1893 C.
- 1894 A
On a new species of *Diplacanthus*, with remarks on the Acanthodian shoulder-girdle.
Geol. Magazine (4), i, pp. 254-257.
- 1894 B
Notes on Palæozoic fishes, No. 1.
Ann. and Mag. Nat. Hist. (6), xiv, pp. 368-374, with pl. ix and 1 text fig.
Describes and figures an English species of *Phlyctenaspis*, a new one of *Acanthaspis*, and one of *Eurylepis*.
- Traquair, R. H.—Continued.** 1894 C
A monograph of the fishes of the Old Red sandstone of Britain. Part II, No. 1. The *Asterolepidæ*.
Palæontographical Society, xlviii, pp. 63-90, with pls. xv-xviii, and text figs. 34-50.
- 1896 A
Review of A. S. Woodward's "Catalogue of the fossil fishes in the British Museum. Part III."
Geol. Magazine (4), iii, pp. 124-127.
- 1899 A
Report on fossil fishes collected by the Geological Survey of Scotland in the Silurian rocks of the south of Scotland.
Trans. Roy. Soc. Edinburgh, xxxix, pp. 827-864, with pls. i-v and 18 text figs.
- 1900 A
Notes on *Drepanaspis gmündenensis* Schlüter.
Geol. Magazine (4), vii, pp. 153-159, with 3 figs. in the text.
- 1900 B
The bearings of fossil ichthyology on the problem of evolution.
Geol. Magazine (4), vii, pp. 463-470, 516-524.
- Trautschold, H.** 1874 A
Fischreste aus dem Devonischen des Gouvernements Tula.
Nouv. Mém. Soc. Imp. Natur. Moscou, xiii, pp. 263-276, with pls. xxvi, xxvii.
Figures and describes various species of *Cladodus*, *Orodus*, *Helodus*, *Psammodus*, etc.
- 1874 B
Die Kalkbrüche von Mjatschkowa. Eine Monographie des oberen Bergkalks.
Nouv. Mém. Soc. Imp. Natur. Moscou, xiii, pp. 277-326, with pls. xxviii-xxxi.
- 1879 A
Ueber eine Ichthyosaurus-Flosse aus dem Moskauer Kimmeridge.
Verhandl. russ.-kais. mineralog. Gesellsch. St. Petersburg (2), xii, pp. 168-173, with pl. v.
- 1879 B
Die Kalkbrüche von Mjatschkowa. Eine Monographie des oberen Bergkalks. Schluss.
Nouv. Mém. Soc. Imp. Natur. Moscou, xiv, pp. 1-82, with pls. i-vii.
- 1880 A
Ueber *Tomodus* Agassiz.
Bull. Soc. Imp. Natur. Moscou, lv, pt. 2, pp. 139-140.
- 1880 B
Ueber *Bothriolepis panderi* Lahusen.
Bull. Soc. Imp. Natur. Moscou, lv, pt. 2, pp. 169-179, with 1 pl. and 5 text figs.

Trautschold, H.—Continued. 1880 CUeber *Dendrodus* und *Coccosteus*.Verhandl. russ.-kais. mineralog. Gesellsch.
St. Petersburg (2), xv, pp. 139-156, with pls.
iii-x.

1883 A

Ueber *Edestus* und einige andere
Fischreste des Moskauer Bergkalks.Bull. Soc. imp. Natur. Moscou, lvii, pt. 2, pp.
160-174, with pl. v and 3 text figs.

1886 A

Ueber das Genus *Edestus*.Bull. Soc. Imp. Natur. Moscou, lxi, pt. i, pp.
94-99.

1888 A

Ueber *Edestus protopirata*, Trd.Zeitschr. deutsch. geol. Gesellsch., xl, pp.
750-753, with 2 figs. in the text.

1889 A

Ueber *Coccosteus megalopteryx*, Trd.,
C. obtusus und *Cheliophorus verneuili*
Ag.Zeitschr. deutsch. geol. Gesellsch., xli, pp.
35-48, with pls. iii-vi.

1889 B

Ueber vermeintliche Dendrodonten.

Zeitschr. deutsch. geol. Gesellsch., xli, pp.
621-634, with pls. xxiii-xxv.

1890 A

Ueber *Protopirata centrodon*, Trd.Bull. Soc. Imp. Natur. Moscou (n. s.), iv,
pp. 317-321, with 1 fig. in the text.The genus *Edestus* is considered.**Treuenfels, Paul.**

1896 A

Die Zähne von *Myliobatis aquila*.Inaugural dissertation at Univ. Basel. Bres-
lau, 1896, 8vo., pp. 1-34, with pls. i, iii.**Troost, G.**

1835 A

On the localities in Tennessee in
which bones of the gigantic mastodon
and *Megalonyx jeffersonii* are found.Trans. Geol. Soc. Penn., i, pp. 139-146; 236-
243.**Troschel, F. H.**

1861 A

Ueber den Unterkiefer der Schlangen
und über die fossile Schlange von Rott.Archiv Naturgesch., xxvii, i, pp. 326-360,
with pl. x.**Trouessart, E. L.**

1889 A

Mammifères.

Annuaire Géol. Universel, v. 1888, Paris.
Pp. 915-970.Généralités, pp. 915-916; Analyse des princi-
paux mémoires relatifs à la classe des mammi-
fères en général, pp. 916-942; Résumé systéma-
tique espèces nouvelles et travaux relatifs aux
différents ordres, familles, etc., pp. 942-970.**Trouessart, E. L.—Continued.** 1892 AThe fiction of the American horse
and the truth on this disputed point.

Science, xx, p. 188.

1897 A

Catalogus Mammalium tam viven-
tium quam fossilium. Nova editio.

Berolini, 1897, pp. 665-1264, 8vo.

Contains the orders *Primates*, *Prosimia*
Chiroptera, *Insectivora*.

1898 A

Catalogus Mammalium tam viven-
tium quam fossilium. Nova editio.

Berolini, 1898, pp. 665-1264, 8vo.

Contains the orders *Sirenia*, *Cetacea*, *Eden-
tata*, *Marsupialia*, *Allotheria*, *Monotremata*.

1899 A

Catalogus Mammalium tam viven-
tium quam fossilium.

Berolini, 1899, pp. 1265-1469, 8vo.

Appendix (Addenda et Corrigenda) and
alphabetical index.**True, Frederick W.**

1889 A

A review of the family *Delphinidae*.Bull. U. S. Nat. Mus., No. 36, Washington,
D. C., 1889, pp. 191, with 47 pls.

1891 A

The puma, or American lion: *Felis
concolor* of Linnaeus.Ann. Rep. Smithsonian. Inst., 1889; Rep. Nat.
Mus., pp. 591-608, with pl. xciv.

1896 A

A revision of the American moles.

Proc. U. S. Nat. Mus., xix, pp. 1-111, with pls.
i-v and 46 text figs.**Tscherski, J. D.**

1892 A

Beschreibung der Sammlung post-
tertiärer Säugethiere.Mém. Acad. Imp. Sci., St. Pétersbourg (7),
xl, No. 1, pp. i-v, 1-511, with pls. i-vi.**Tullberg, Tycho.**

1899 A

Ueber das System der Nagethiere:
eine phylogenetische Studie.8vo., pp. i-v; 1-514; A1-A18, pls. i-lvii.
Upsala, 1899.Pp. 501-514 are occupied by a list of works
dealing with the subject.**Tuomey, M.**

1847 A

Discovery of the cranium of the
zeuglodon.Amer. Jour. Sci. (2), iv, pp. 283-285, with 1
fig. in the text.

1847 B

Notice of the discovery of a cranium
of the zeuglodon.Proc. Acad. Nat. Sci. Phila., iii, pp. 151-153,
with 2 woodcuts.

- Tuomey, M.**—Continued. 1847 C
Notice of the discovery of a cranium
of the zeuglodon (*Basilosaurus*).
Jour. Acad. Nat. Sci. Phila. (2), i, pp. 16-17.
- 1850 A
[Remarks on a fossil reptile from
Alabama, belonging to the genus *Leio-*
don. Followed by remarks by Prof.
L. Agassiz.]
Proc. Amer. Assoc. Adv. Sci., 3d meeting,
Charleston, S. C., 1850, p. 74.
- 1858 A
[Descriptions and figures of *Ctena-*
canthus elegans, *Cladodus newmani*, *C.*
magnificus.]
Second Biennial Report Geol. Alabama, by
M. Tuomey, A. M., edited by J. W. Mallet,
Ph. D. Pp. i-xix, 1-292.
Appended are lists of Cretaceous and Ter-
tiary fossils, including a number of sharks, pp.
261-268. The species named above are de-
scribed on pp. 38-40.
- Turner, George.** 1799 A
Memoir on the extraneous fossils
denominated mammoth bones; princi-
pally designed to show that they are
the remains of more than one species
of nondescript animal.
Trans. Amer. Philos. Soc., iv, pp. 510-518.
- Turner, H. N., jr.** 1848 A
Observations relating to some of the
foramina at the base of the skull in
Mammalia, and on the classification of
the order *Carnivora*.
Proc. Zool. Soc. Lond., 1848, pt. xvi, pp. 63-
88.
- 1850 A
On the generic subdivisions of the
Bovidae, or hollow-horned ruminants.
Proc. Zool. Soc. Lond., 1850, pt. xviii, pp.
164-178.
- 1872 A
Some observations on the dentition
of the narwhal (*Monodon monoceros*).
Jour. Anat. and Physiol., vii, pp. 75-79.
- 1873 A
Note on a bidental skull of a nar-
whal.
Jour. Anat. and Physiol., viii, pp. 133-134.
- 1876 A
Additional note on the dentition of
the narwhal (*Monodon monoceros*).
Jour. Anat. and Physiol., x, p. 516.
- Turner, William.** 1899 A
On the development and morphology
of the marsupial shoulder girdle.
Trans. Roy. Soc. Edinburgh, xxxix, pp. 749-
770, with pls. i, ii.
- Ubaghs, Casimir.** 1875 A
La Chelonia hoffmanni.
Ann. Soc. Géol. Belgique, ii, pp. 197-205.
- Udden, J. A.** 1891 A
Megalonyx beds in Kansas.
Amer. Geologist, vii, pp. 340-345, with 3
woodcuts in the text.
- 1899 A
Dipterus in the American Middle
Devonian.
Jour. Geology, vii, pp. 494-495, with 1 fig. in
the text.
- Underwood, Lucien.** 1890 A
A bison at Syracuse, N. Y.
Amer. Naturalist, xxiv, pp. 953-954.
Followed by a note by Professor Cope iden-
tifying the specimen as *Bos americanus*.
- Ussow, S. A.** 1898 A
Die Entwicklung der Cycloid-
Schuppe der Teliostier.
Bull. Soc. Imp. Natur. Moscou (n. s.), xi,
1897, pp. 339-366, with pls. vi, vii.
- 1900 A
Zur Anatomie und Entwicklungsge-
schichte der Wirbel der Teleostier.
Bull. Soc. Imp. Natur. Moscou (n. s.), xv,
1900, pp. 175-240, with pls. i-iv.
- Vaillant, Léon.** 1883 A
Remarques sur les affinités naturelles
des familles composant le sous-ordre des
poissons malacoptérygiens abdomi-
naux.
Ann. Sci. Naturelles (6), Zool., xv, art. 7, pp.
1-13.
- 1891 A
Sur la signification taxonomique du
genre *Emys* C. Duméril.
Ann. Sci. Naturelles (7), Zool., xii, pp. 51-63.
- 1894 A
Essai sur la classification générale des
chéloniens.
Ann. Sci. Naturelles (7), Zool., xvi, pp. 331-345.
- Van Beneden, P. J.** 1861 A
Un mammifère nouveau du Crag
d'Anvers.
Bull. Acad. Roy. Belgique (2), xii, pp. 22-28.
Describes *Squalodon antverpiensis*, and holds
that *Squalodon* and *Zeuglodon* belong to differ-
ent families.

Van Beneden, P. J.—Cont'd. 1861 B
Sur le développement de la queue des poissons plagiostomes.

Bull. Acad. Roy. Belgique (2), xi, pp. 287-293, with 1 pl.

Published also as a separate, with pp. 3-8.

1865 A

Recherches sur les ossements provenant du Crag d'Anvers, les Squalodons. Mém. Acad. Roy. Belgique, xxxv, art. iii, pp. 1-85, with pls. i-iv, and many text figs.

On pp. 11-12 of this memoir is found a list of the works which have been published on the Zeuglodonts and Squalodonts.

1868 A

De la composition du bassin des cétacés.

Bull. Acad. Roy. Belgique (2), xxv, pp. 428-433, with 1 pl.

1872 A

Les Balenidés fossiles d'Anvers.

Jour. de Zoologie, i, pp. 407-419.

Extract from Bull. Acad. Roy. Belgique (2), xxxiv, pp. 6-20, 1872.

1872 B

Les baleines fossiles d'Anvers.

Bull. Acad. Roy. Belgique (2), xxxiv, pp. 6-20.

1875 A

Le squelette de la baleine fossile du Musée de Milan.

Bull. Acad. Roy. Belgique (2), xi, pp. 736-758, with 1 pl.

Describes and figures *Plesiocetus cortesi*.

1877 A

Description des ossements fossiles des environs d'Anvers. Première partie: Les phoques ou les amphitériens.

Ann. Mus. Roy. d'Hist. Nat. Belgique, i, pp. 1-88, with pls. i-xviii, and 17 figs. and 8 maps in the text.

1877 B

Note sur un cachalot nain du Crag d'Anvers (*Physeterula dubusii*).

Bull. Acad. Roy. Belgique (2), xiv, pp. 851-856, with 1 pl.

1880 A

Description des ossements fossiles des environs d'Anvers. Deuxième partie: Cétacés, genres *Balenula*, *Balæna*, et *Balænotus*.

Ann. Mus. Roy. d'Hist. Nat. Belgique, iv, pp. 1-83, with pls. i-xxxix.

This work contains a very full bibliography of the fossil *Cetacea*.

1880 B

Les mysticètes à court fanons des sables des environs d'Anvers.

Bull. Acad. Roy. Belgique (2), i, pp. 11-26.

Van Beneden, P. J.—Cont'd. 1882 A

Description des ossements fossiles des environs d'Anvers. Troisième partie: Cétacés, genres *Megaptera*, *Balænoptera*, *Burtinopsis*, et *Erpetocetus*.

Ann. Mus. Roy. d'Hist. Nat. Belgique, vii, pp. 1-90, with pls. xl-cix.

Part iv, describing the genus *Plesiocetus*, is found in vol. ix of the Annales. Pt. v, describing *Amphicetus*, *Heterocetus*, etc., is in vol. xiii. These genera have not been found in North America.

1882 B

Une baleine fossile de Croatie appartenant au genre *Mésocète*.

Mém. Acad. Roy. Sci. Lettres et Beaux-Arts, xlv, art. 2, pp. 3-29, with pls. i-ii.

Van Beneden, P. J., and Gervais, P. 1880 A

Ostéographie des cétacés vivants et fossiles, comprenant la description et l'iconographie du squelette et du système dentaire de ces animaux; ainsi que des documents relatifs à leur histoire naturelle.

Paris, 1880, pp. i-viii, 1-634, with atlas of 64 pls.

Van Beneden, P. J. and Koninck, L. G. de. 1864 A

Notice sur le *Palædaphus insignis*.

Bull. Acad. Roy. Belgique (2), xvii, pp. 143-151, with pls. i, ii.

Van Rensselaer, Jeremiah. 1826 A

Notice of a recent discovery of the fossil remains of the mastodon.

Amer. Jour. Sci. (1), xi, pp. 246-250.

1827 A

On the fossil remains of the mastodon lately found in Ontario County, N. Y.

Amer. Jour. Sci. (1), xii, pp. 380-381.

1828 A

On the fossil tooth of an elephant found near the shore of Lake Erie, and on the skeleton of a mastodon lately discovered on the Delaware and Hudson Canal.

Amer. Jour. Sci. (1), xiv, pp. 31-33.

Van Wijhe, J. W. 1882 A

Ueber das Visceralskelet und die Nerven des Kopfes der Ganoiden und von *Ceratodus*.

Niederländisches Archiv Zoologie, v, pp. 205-320, with pls. xv and xvi.

Besides the subjects of the title, this paper treats of the "otic bones."

Vasseur, Gaston. 1874 A

Sur le pied de derrière de l'*Hyænodon parisiensis*.

Comptes rend. Acad. Sci. Paris, lxxviii, pp. 1446-1447.

Vasseur, Gaston—Continued. 1875 A
 Sur le cubitus de *Oryphodon oweni*.
 Bull. Soc. Géol., France (3), iii, pp. 181-186,
 pl. iii.

Vetter, Benjamin. 1881 A
 Die Fische aus dem lithographischen
 Schiefer im Dresdener Museum.
 Mittheil. k. min., geol., u. prähist. Mus.
 Dresden, Heft 4, pp. i-viii, 1-118, with pls.
 i-iii.

1885 A
 Ueber die Verwandschaftsbeziehun-
 gen zwischen Dinosauriern und Vögeln.
 Festschrift naturw., Gesellsch. Isis, Dresden,
 Feier 50jährig. Bestehens, pp. 109-122.

Vogt, Carl. 1880 A
Archæopteryx macrura, an interme-
 diate form between birds and reptiles.
 The Ibis (4), iv, pp. 434-456, with pl. xiii,
 and 4 figs. in the text.

Voigt, Fr. S. 1835 A
 Thier-Fährten in Hildburghäuser
 Sandsteine (*Paleopithecus*).
 Neues Jahrb. Mineral., 1835, pp. 322-326.

Vrolik, A. J. 1873 A
 Ueber die Verknöcherung und die
 Knochen des Schädels der *Teleostei*.
 Niederländisches Archiv. Zoologie, i, pp.
 219-318, with pls. xviii-xxii.
 I. Synonymie der Schädelknochen bei den
Teleostei, pp. 221-230, with a table.
 II. Ueber die Verknöcherung des Teleos-
 tierschädels, pp. 231-260.
 III. Die Knochen des Teleostierschädels,
 pp. 261-290, with a table.
 IV. Die Verknöcherung des Schläfenbeins
 der Säugethiere, pp. 291-318.
 This paper also gives consideration to the
 "otic bones." In opposition to the views of
 Vrolik, see Van Wijhe, J. W., 1882 A.

Wagner, Andreas. 1851 A
 Beiträge zur Kenntniss der in den
 lithographischen Schiefer abgelager-
 ten urweltlichen Fische.
 Abhandl. k. bayer. Akad. Wissensch., math.-
 phys. Cl., vi, pp. 1-80, with pls. i-iv.

1851 B
 Beschreibung einer neuen Art von
Ornithocephalus, nebst kritischer Ver-
 gleichung der in der k. palæontolo-
 gischen Sammlung zu München aufge-
 stellten Arten aus dieser Gattung.
 Abhandl. k. bayer. Akad. Wissensch., math.-
 phys. Cl., vi, pp. 127-193, pls. v-vi.

1853 A
 Beschreibung einer fossilen Schild-
 kröte und etlicher anderer Reptilien-

Wagner, Andreas—Continued.
 überreste aus den lithographischen
 Schiefer und dem Grünsandsteine von
 Kelheim.

Abhandl. k. bayer. Akad. Wissensch., math.-
 phys. Cl., vii, pp. 241-264, with pls. iv-vi.

Describes *Platycheilus oberdorferi*, *Idiocheilus*,
 and *Homæosaurus*.

1861 A
 On a new fossil reptile supposed to
 be furnished with feathers.
 Ann. and Mag. Nat. Hist. (3), ix, pp. 261-
 267 (1862).
 Translated from the Sitzungsber. Akad.
 Wissensch. München, 1861, p. 146.

1861 B
 Monographie der fossilen Fische aus
 den lithographischen Schiefer Bay-
 erns. Erste Abtheilung. Plakoiden
 und Pyknodonten.

Abhandl. k. bayer. Akad. Wissensch., math.-
 phys. Cl., ii, Abth., ii, pp. 277-352, with pls. iv-vii.

1863 A
 Monographie der fossilen Fische aus
 den lithographischen Schiefer Bay-
 erns. Zweite Abtheilung.
 Abhandl. k. bayer. Akad. Wissensch., math.-
 phys. Cl., ix, pp. 613-748, with pls. ii-vii.
 Also issued as reprint with pp. 43-138.

Wagner, George. 1898 A
 On some turtle remains from the
 Fort Pierre.
 Kansas Univ. Quarterly, vii, A, pp. 201-206,
 with 2 figs. in the text.

1899 A
 On *Tetracaulodon* (*Tetrabelodon*) *shep-
 ardi* Cope.
 Kansas Univ. Quarterly, viii, A, pp. 99-103,
 with pls. xxiv, xxv.

Wailles, B. L. C. 1854 A
 Report on the agriculture and geology
 of Mississippi, embracing a sketch of
 the social and natural history of the
 State.

Pp. i-xx; 1-371.

Published by order of the legislature.

Contains remarks on a few fossil vertebrates
 and a list, by Dr. Leidy, of those found in Missis-
 sippi.

Walcott, C. D. 1892 A
 Notes on the discovery of a vertebrate
 fauna in Silurian (Ordovician) strata.
 Bull. Geol. Soc. America, iii, pp. 153-172,
 pls. 3-5.

Describes *Dictyorhabdus priscus*, *Astraspis
 desiderata*, and *Eryptichius americanus*.

See Neues Jahrb., Mineral., 1895, p. 162, for
 Otto Jaekel's review; Amer. Naturalist, xxvii,
 p. 268, for notice by Cope.

- Walcott, C. D.**—Continued. 1900 A
Correspondence relating to collection of vertebrate fossils made by the late Prof. O. C. Marsh.
Science (2), xi, pp. 22-23.
This letter, directed to Prof. S. P. Langley, contains a partial list of the types of species described by Professor Marsh, and now in the National Museum.
- Walker, S. T.** 1883 A
On the origin of the fossil bones discovered in the vicinity of Tise's Ford, Florida.
Proc. U. S. Nat. Mus., vi, pp. 427-428.
- Walter, Ferdinand.** 1887 A
Das Visceralskelet und seine Muskulatur bei den einheimischen Amphibien und Reptilien.
Jenaische Zeitschr. Naturwiss., xxi (xiv), pp. 1-45, with pls. i-iv.
- Wanner, Atreus.** 1889 A
The discovery of fossil tracks, algæ, etc., in the Triassic of York County, Pa.
Ann. Report Geol. Surv. Penn., for 1887, pp. 21-27, with pls. iv-xiii.
No names are given to the tracks figured.
- 1892 A
Fossil tracks in the Trias of York County, Pa.
Proc. Amer. Assoc. Adv. Sci., 39th meeting, Washington, 1891, p. 286. A brief abstract.
- Ward, Henry A.** 1864 A
Notice of the *Megatherium cuvieri*, the giant fossil ground-sloth of South America. Presented to the University of Rochester by Hiram Sibley, esq.
Pp. 1-34, with 1 large pl.
Has, in addition, a brief description of *Megalonix jeffersoni*.
- Ward, Henry L.** 1887 A
The pelvis of the dugong.
Science, ix, p. 536, with 1 woodcut.
- Ward, John.** 1890 A
The geological features of the North Staffordshire coal fields, their organic remains, their range and distribution; with a catalogue of the fossils of the Carboniferous system of North Staffordshire.
Trans. North Staffordshire Mining and Mechan. Engineers, x, pp. 1-189, with index, pp. i-ix, and pls. i-ix.
- Warren, John C.** 1846 A
On the osteology and dentition of some North American mastodons.
Ann. and Mag. Nat. Hist. (1), xvii, pp. 145-150.
A letter addressed to Prof. R. Owen and sent by him to the editors.
- 1850 A
On the *Mastodon angustidens*.
Proc. Amer. Assoc. Adv. Sci., 2d meeting, 1849, Cambridge, Mass., pp. 93-94.
- 1852 A
[Remarks on a supposed tooth of *Mastodon angustidens*.]
Proc. Boston Soc. Nat. Hist., iv, pp. 129-131.
- 1852 B
[Remarks on the supposed food of *Mastodon giganteus*.]
Proc. Boston Soc. Nat. Hist., iv, p. 154.
- 1852 C
The *Mastodon giganteus* of North America.
Pp. i-viii; 1-219, 4to, with vignette and pls. i-xxvi and 1 large additional pl. Boston, 1852, John Wilson & Son.
A second edition of this work was published in 1855.
- 1854 A
Remarks on some fossil impressions in the sandstone rocks of Connecticut River.
8vo; pp. 1-54, with 1 pl. and 2 text figs. Boston, 1854.
A popular account of the impressions, footmarks, etc., of the sandstones referred to.
- 1855 A
Supernumerary tooth in *Mastodon giganteus*.
Amer. Jour. Sci. (2), xix, pp. 349-353.
- 1855 B
The *Mastodon giganteus* of North America.
2d edition, 260 pp., 4to, with 31 pls.; Boston, 1855.
Contains 3 new plates and some additions to text of the first edition, which appeared in 1852.
- 1855 C
Supernumerary tooth in jaw of *Mastodon*.
Proc. Boston Soc. Nat. Hist., v, pp. 146-150.
- 1855 D
Brief history of the zeuglodon.
Proc. Boston Soc. Nat. Hist., v, pp. 91-92.

- Warren, John C.**—Continued. 1856 A
New remarkable gigantic fossils and footmarks.
Proc. Boston Soc. Nat. Hist., v, pp. 298-306.
- Waterhouse, G. R.** 1838 A
On the skull and dentition of the American badger (*Meles labradoria*).
Proc. Zool. Soc. Lond., 1838, pt. vi, pp. 153-154.
- 1839 A
On the skulls and dentition of the *Carnivora*.
Proc. Zool. Soc. Lond., 1839, pt. vii, pp. 135-137.
- Weber, Max.** 1886 A
Studien über Säugethiere. Ein Beitrag zur Frage nach dem Ursprung der Cetaceen.
Jena, 1886, 8vo, pp. i-vi; 1-252, with pls. i-iv.
Reviewed by M. Schlosser in Archiv f. Anthrop., xviii, pp. 143-146.
- 1887 A
Über die cetoide Natur der *Promammalia*.
Anatom. Anzeiger, ii, pp. 42-55.
- 1888 A
Anatomisches über Cetaceen. I. Ueber den Carpus der Cetaceen; II. Ueber den Magen der Cetaceen.
Morpholog. Jahrbuch, xiii, pp. 616-653, with pls. xxvii-xxviii, and 2 woodcuts.
- 1893 A
Bemerkungen über den Ursprung der Haare und über Schuppen bei Säugethiere.
Anatom. Anzeiger, viii, pp. 413-423.
- 1893 B
Zur Frage nach dem Ursprung der Schuppen der Säugethiere.
Anatom. Anzeiger, viii, pp. 649-651.
- 1898 A
Studien über Säugethiere.
Pp. i-iv, 1-152, with pls. i-iv. 8vo, Jena, 1898.
Part II of this work is entitled "Anatomische Bemerkungen über Elephas," pp. 135-152, pl. iv.
- Weil, Richard.** 1899 A
Development of the ossicula audita in the opossum.
Ann. N. Y. Acad. Sci., xii, pp. 103-107, with pls. ii, iii.
- Weithofer, Anton.** 1888 A
Beiträge zur Kenntniss der Fauna von Pikermi bei Athen.
Beiträge Paläontologie Oesterreich-Ungarns (Mojsisovics and Neumayer), vi, pp. 225-292, with pls. x-xix.
Reviewed by M. Schlosser in Archiv f. Anthrop. xix, pp. 146-148.
- 1888 B
Einige Bemerkungen über den Carpus der Proboscidiere.
Morpholog. Jahrbuch, 1888, pp. 507-516.
- 1890 A
Die fossilen Proboscidiere des Arnethales in Toskana.
Beiträge Paläontologie Oesterreich-Ungarns (Mojsisovics and Neumayer), viii, pp. 108-240, with pls. i-xv.
Review in Archiv f. Anthrop., xx, pp. 116-118.
- 1893 A
Proboscidiani fossili di Valdarno in Toscana.
Memoire per servire alla descrizione della carta geologica d'Italia, iv, pt. 2, pp. 1-152, with pls. 1-xv.
- Wellburn, Edgar D.** 1900 A
On the genus *Megalichthys*, Agassiz; its history, systematic position, and structure.
Proc. Yorkshire Geol. and Polytech. Soc. (2), xiv, pp. 52-71, with pls. xiii-xvii, xix.
- 1900 B
On *Rhadinichthys monensis*, Egerton, and its distribution in the Yorkshire coal field.
Geol. Magazine (4), vii, pp. 260-263, with 1 fig. in the text.
- Weller, Stuart.** 1899 A
A peculiar Devonian deposit in north-eastern Illinois.
Jour. Geology, vii, pp. 483-488, with 3 text figs.
Reports occurrence of *Ptychodus calceolus*, *Diplodus priscus*, and *D. striatus*.
- West, H. H.** 1877 A
Wonderful discoveries in the Sandstone rocks of Colorado.
Western Review of Science and Industry, i, pp. 564-565 (Kansas City, Mo.).
A description of the finding of some huge reptilian bones near Morrison, Colo. Copied from the Colorado Springs Gazette.
- Weyhe, —.** 1875 A
Uebersicht der Säugethiere nach ihren Beckenformen.
Zeitschr. gesamm. Naturwiss., xlv (n. F. xi), 1875, pp. 97-123.

- Wheatley, Charles M.** 1861 A
Remarks on the Mesozoic red sandstone of the Atlantic slope, and notice of the discovery of a bone bed therein, at Phoenixville, Pa.
Amer. Jour. Sci. (2), xxxii, pp. 41-48.
- 1871 A
Notice of the discovery of a cave in eastern Pennsylvania, containing remains of post-Pliocene fossils, including those of mastodon, tapir, megalonyx, mylodon, etc.
Amer. Jour. Sci. (3), i, pp. 235-237, with 2 figs. showing the location of the cave.
- 1871 B
The bone cave of eastern Pennsylvania.
Amer. Jour. Sci. (3), i, pp. 384-385.
Contains a list of the species found up to that time in Port Kennedy bone cave.
- Wheeler, William.** 1878 A
A fossil tusk found in Franklin County, [Kansas].
Trans. Kansas Acad. Sci., vi, p. 11.
Supposed to be mastodon.
- Wheeler, William Morton.** 1899 A
George Baur's life and writings.
Amer. Naturalist, xxxiii, pp. 15-30, with portrait.
This paper ends with a list of Dr. Baur's scientific writings, 144 in number.
- Whipple, S. H.** 1844 A
Notice of bones of mastodon.
Proc. Amer. Philos. Soc., iv, pp. 35-36.
A letter accompanying a collection of mastodon bones from Benton County, Mo.
- White, C. A.** 1883 A
On the commingling of ancient faunal and modern floral types in the Laramie group.
Amer. Jour. Sci. (3), xxvi, pp. 120-123.
- 1887 A
On the interrelations of contemporaneous fossil faunas and floras.
Amer. Jour. Sci. (3), xxxiii, pp. 364-374.
- White, Philip J.** 1895 A
The existence of skeletal elements between the mandibular and hyoid arches in *Hexanchus* and *Læmargus*.
Anatom. Anzeiger, xi, pp. 57-60, with 3 figs.
- Whiteaves, J. F.** 1880 A
On a new species of *Pterichthys*, allied to *Bothriolepis ornata*, from the Devonian rocks of the north side of the Baie des Chaleurs.
Amer. Jour. Sci. (3), xx, 132-136.
- Whiteaves, J. F.—Continued.** 1881 A
On some remarkable fossil fishes from the Devonian rocks of Scaumenac Bay, Province of Quebec.
Amer. Jour. Sci. (3), xxi, pp. 494-496.
Also in Ann. and Mag. Nat. Hist. (5), viii, 159-162.
Diplacanthus striatus? *Phaneropleuron curtum*, *Eusthenopteron foordii*, *Glyptolepis microlepidotus*, *Glyptolepis* —, and *Cheirolepis canadensis* are described.
- 1881 B
On a new species of *Pterichthys*, allied to *Bothriolepis ornata* Eichwald, from the Devonian rocks of the north side of the Baie des Chaleurs.
Canadian Naturalist (2), x, pp. 23-27.
- 1881 C
On some remarkable fossil fishes from the Devonian rocks of Scaumenac Bay, P. Q., with descriptions of a new genus and three new species.
Canadian Naturalist (2), x, pp. 27-35.
- 1881 D
Description of a new species of *Psammodus* from the Carboniferous rocks of the island of Cape Breton.
Canadian Naturalist (3), x, p. 36.
Describes *Psammodus bretonensis*.
- 1881 E
On some fossil fishes, crustacea, and mollusca from the Devonian rocks at Campbellton, N. B., with descriptions of five new species.
Canadian Naturalist (2), x, pp. 93-101, with 1 fig. in the text.
Describes *Coccosteus acadicus*, *Cephalaspis campbelltonensis*, *Ctenacanthus latispinosus* and *Homacanthus* sp. indet.
- 1883 A
Recent discoveries of fossil fishes in the Devonian rocks of Canada.
Proc. Amer. Assoc. Adv. Sci., 31st meeting, Montreal, 1882, pp. 353-356.
- 1883 B
Recent discoveries of fossil fishes in the Devonian rocks of Canada.
Amer. Naturalist, xvii, pp. 158-164.
- 1887 A
Illustrations of the fossil fishes of the Devonian rocks of Canada.
Trans. Roy. Soc. Canada, iv, sec. iv, 1886, pp. 101-110; pls. vi-x.
- 1889 A
Illustrations of the fossil fishes of the Devonian rocks of Canada. Part II.
Trans. Roy. Soc. Canada, vi, sec. iv, 1888, pp. 77-96; pls. v-x.

Whiteaves, J. F.—Continued. 1889 B

On some fossils from the Hamilton formation of Canada, with a list of the species at present known from that formation and province. 3. The fossils of the Triassic rocks of British Columbia. 4. On some Cretaceous fossils from British Columbia, the Northwest Territory, and Manitoba.

Geol. and Nat. Hist. Survey of Canada. Contrib. to Canad. Palæont. i, part ii, art. 2, pp. 91-196, with pls. xii-xxvi.

1892 A

The fossils of the Devonian rocks of the islands, shores, or immediate vicinity of Lakes Manitoba and Winnipegosis.

Geol. Surv. Canada. Contrib. to Canad. Palæont., i, part iv, art. 6, pp. 255-359, with pls. xxxiii-xlvii.

On pages 353 and 354, pls. xlvii and xlviii, certain fossil fishes are described and figured.

1898 A

Note on a fish tooth from the Upper Arisaig series of Nova Scotia.

Canadian Record of Science, vii, pp. 461-462, with 1 text fig.

Also in Report Brit. Assoc. Adv. Sci. for 1897, Toronto meeting, pp. 656-657.

Describes *Dendrodus arisaigensis* from rocks supposed to be of Silurian, possibly Devonian, age.

1898 B

On some additional or imperfectly understood fossils from the Hamilton formation of Ontario, with a revised list of the species therefrom.

Geol. Surv. Canada. Contrib. to Canad. Palæont., i, pp. 361-436, with pls. xlviii-l.

1899 A

The Devonian system in Canada.

Science (2), x, pp. 402-412; 430-438.

Also in Proc. Amer. Assoc. Adv. Sci., xlviii (Columbus), pp. 193-223.

Whitfield, R. P. 1888 A

Evidence confirmatory of *Mastodon obscurus* Leidy as an American species.

Proc. Amer. Assoc. Adv. Sci., 36th meeting, New York, 1887, p. 252-253.

1890 A

Observations on a fossil fish from the Eocene beds of Wyoming.

Bull. Amer. Mus. Nat. Hist., iii, pp. 117-120, with pl. iv.

1891 A

Mastodon remains on New York Island.

Science, xviii, p. 342.

Whitfield, R. P.—Continued. 1900 A

Note on the principal type specimen of *Mosasaurus maximus* Cope, with illustrations.

Bull. Amer. Mus. Nat. Hist., xiii, pp. 25-29, with pls. iv, v.

Whitfield, R. P. and Hovey, E. O. 1900 A

A catalogue of the types and figured specimens in the palæontological collection of the geological department, American Museum of Natural History.

Bull. Amer. Mus. Nat. Hist., xi, pp. 190-356.

On page 348 there is noted the presence of five types of fossil fishes in the museum.

Whitney, J. D. 1867 A

Notice of a human skull recently taken from a shaft near Angels, Calaveras County.

Amer. Jour. Sci. (2), xliii, pp. 265-267.

Taken from Proc. California Acad. Nat. Sci., iii, pp. 277.

1879 A

The animal remains, not human, of the auriferous gravel series.

Mem. Mus. Comp. Zool., vi, pp. 239-258.

This forms sec. iv of chap. iii of Whitney's "The auriferous gravels of the Sierra Nevada of California."

The descriptions of the species have all been published by Dr. Leidy elsewhere, but those of the equine animals are reproduced.

Whittlesey, Charles. 1848 A

Notes upon the drift and alluvium of Ohio and the West.

Amer. Jour. Sci. (2), v, pp. 205-217.

1869 A

On the evidences of the antiquity of man in the United States.

Proc. Amer. Assoc. Adv. Sci., 17th meeting, Chicago, 1868, pp. 268-288.

Wiedersheim, Robert. 1876 A

Die ältesten Formen des Carpus und Tarsus der heutigen Amphibien.

Morpholog. Jahrbuch, ii, pp. 421-434, with pl. xxix.

See also "Nachträgliche Bemerkungen" in vol. iii, pp. 152-154, with 5 figs.

1877 A

Das Kopfskelet der Urodelen.

Morpholog. Jahrbuch, iii, pp. 352-448, with pls. xix-xxiii and 1 woodcut; pp. 459-548, with pls. xxiv-xxvii and 5 woodcuts.

1878 A

Labyrinthodon rütimeyeri. Ein Beitrag zur Anatomie von Gesamtskelet und Gehirn der triassischen Labyrinthodonten.

Abhandl. schweizer. paläontolog. Gesellsch., v, pp. 1-56, with 3 pls.

Wiedersheim, Robert—Cont'd. 1880 A
Das Skelet von *Pleurodeles waltlii*.
Jenaische Zeitschr. Naturwiss., xiv (vii), pp. 1-38, with pl. i.

1880 B
Das Skelet und Nervensystem von
Lepidosiren annectens (*Protopterus*).
Jenaische Zeitschr. Naturwiss., xiv (vii), pp. 155-192, with pls. vii, viii.

1881 A
Zur Paläontologie Nord-Amerikas.
Biolog. Centralbl., i, pp. 359-372.

1884 A
Die Stammesentwicklung der Vögel.
Biolog. Centralbl., iii, pp. 654-668.

1889 A
Über die Entwicklung des Schulter-
und Beckengürtels.
Anatom. Anzeiger, iv, pp. 428-441.

1890 A
Weitere Mitteilungen über die Ent-
wicklungsgeschichte des Schulter- und
Beckengürtels.
Anatom. Anzeiger, v, pp. 13-26.

Wiegmann, Fr. Aug. 1838 A
Ueber das Gebiss des Wallrosses.
Archiv Naturgesch., iv, Bd. i, pp. 113-130.

Wieland, George R. 1896 A
Archelon ischyros: a new gigantic
cryptodire testudinate from the Fort
Pierre Cretaceous of South Dakota.
Amer. Jour. Sci. (4), ii, pp. 399-412, with pl.
vi and 19 figs. in the text.
Describes under above name the carapace
and other bones of a new turtle.

1898 A
The Protostegan plastron.
Amer. Jour. Sci. (4), v, pp. 15-20, with pl. ii
and 2 figs. in the text.

1899 A
The terminology of vertebral centra.
Amer. Jour. Sci. (4), viii, pp. 163-164.

1900 A
The skull, pelvis, and probable rela-
tionships of the huge turtles of the
genus *Archelon* from the Fort Pierre
Cretaceous of South Dakota.
Amer. Jour. Sci. (4), ix, pp. 237-251, with
pl. ii and 6 text figs.

Noticed by Osborn, Science, xii, 1900, p. 2.

1900 B
Some observations on certain well-
marked stages in the evolution of the
testudinate humerus.

Amer. Jour. Sci. (4), ix, pp. 413-424, with 23
text. figs.

Wilckens, M. 1884 A
Uebersicht über die Forschungen
auf dem Gebiete der Paläontologie der
Haustiere. 1. Die pferdeartigen Tiere
des Tertiärs.

Biolog. Centralbl., iv, pp. 137-154; 183-188.

1884 B
Uebersicht über die Forschungen
auf dem Gebiete der Paläontologie der
Haustiere. 2. Die Pferde des Diluviums.
Biolog. Centralbl., iv, pp. 294-310; 327-344.
Contains Lydekker's list of Pliocene and
recent *Equidae*.

1885 A
André Sanson, Sur les Equidés quar-
ternaires.
Biolog. Centralbl., v, pp. 184-187.

1885 B
Uebersicht über die Forschungen
auf dem Gebiete der Paläontologie der
Haustiere. 5. Die schweinartigen Tiere
(Suiden).
Biolog. Centralbl., v, pp. 208-222; 233-241;
263-270; 295-308; 332.

1885 C
Uebersicht über die Forschungen
auf dem Gebiete der Paläontologie der
Haustiere. 6. Die Kamelartigen Tiere
(Cameliden).
Biolog. Centralbl., v, pp. 418-434.

1885 D
Uebersicht über die Forschungen auf
dem Gebiete der Paläontologie der
Haustiere. 7. Die hundartigen Tiere
(Caniden) des Tertiärs.
Biolog. Centralbl., v, pp. 459-468; 489-499;
518-529.

1885 E
Uebersicht über die Forschungen auf
dem Gebiete der Paläontologie der
Haustiere. 3. Die Abstammung des
Rindes und die tertiären Formen des-
selben.

Biolog. Centralbl., iv, pp. 749-766.
Reviews of Wilckens's various papers by M.
Schlosser in Archiv f. Anthrop., xvii, pp. 187-
191; xviii, pp. 146-150.

1888 A
Beitrag zur Kenntniss des Pferdege-
bisses mit Rücksicht auf die fossilen
Equiden von Maragha in Persien.
Nova Acta Caes. Akad., Leop.-Car., lii, pp.
257-284, with pls. ix-xvi.

Wilder, B. G. 1871 A
Mastodon remains in central New
York.
Amer. Jour. Sci. (3), ii, p. 58.
A brief note.

- Wilder, B. G.**—Continued. 1880 A
Some recent American papers in comparative anatomy.
Science (John Michels, editor), i, pp. 322-323.
- Wildermuth, H. A.** 1877 A
Der feinere Bau der lufthaltigen Vogelknochen nebst Beiträgen zur Kenntniss ihrer Entwicklung.
Jenaische Zeitschr. Naturwiss., xi (o. s.), pp. 537-550, with pl. xxxvi.
- Willemoes-Suhm, Rudolph.** 1869 A
Ueber *Cœlacanthus* und einige verwandte Gattungen.
Palæontographica, xvii, pp. 73-88, with pls. x-xi.
- Williams, Henry S.** 1882 A
Note on some fish-remains from the Upper Devonian rocks in New York State.
Proc. Amer. Assoc. Adv. Sci., 30th meeting, Cincinnati, 1881, pp. 192-193.
Describes *Dipterus ithacensis*.
- 1887 A
On the fossil faunas of the Upper Devonian, the Genesee section, New York.
Bull. U. S. Geol. Surv. No. 41, pp. 1-104, with pls. i-iv.
- 1891 A
On the plates of *Holonema rugosa*.
Proc. Amer. Assoc. Adv. Sci., 39th meeting, Indianapolis, 1890, p. 337.
- 1892 A
The scope of palæontology and its value to geologists.
Proc. Amer. Assoc. Adv. Sci., 41st meeting, Rochester, 1892, pp. 149-170.
Vice-presidential address before Amer. Assoc. Adv. Sci., 1892.
- 1893 A
On the ventral plates of the carapace of the genus *Holonema* of Newberry.
Amer. Jour. Sci. (3), xlv, 285-288, with figs. in the text.
- Williams, Herbert Upham.** 1886 A
Notes on the fossil fishes of the Genesee and Portage black shales.
Bull. Buffalo Soc. Nat. Sci., v, pp. 81-84, with 1 pl.
- Williamson, W. C.** 1837 A
On the affinity of some fossil scales of fish from the Lancashire Coal measures with those of the recent *Salmonidæ*.
Lond. and Edinb. Philos. Mag. and Jour. Sci. (3), xi, pp. 300-301, with pl. ii.
The scales here described and figured are now referred to *Rhizodopsis sauroides*.
- Williamson, W. C.**—Continued. 1849 A
On the microscopic structure of the scales and dermal teeth of some Ganoid and Placoid fishes.
Philos. Trans. Roy. Soc. Lond., 1849, pp. 435-475; pls. 40-43.
- Williston, S. W.** 1878 A
American Jurassic dinosaurs.
Trans. Kansas Acad. Sci., vi, pp. 42-46.
- 1890 A
Structure of the plesiosaurian skull.
Science, xvi, p. 262.
- 1890 B
Structure of the plesiosaurian skull.
Science, xvi, p. 290.
- 1890 C
Note on the pelvis of *Cumnoria* (*Camp-tosaurus*.)
Amer. Naturalist, xxiv, pp. 472-473.
- 1890 D
A new plesiosaur from the Niobrara Cretaceous of Kansas.
Trans. Kansas Acad. Sci., xii, pp. 174-178, with 2 figs. in the text.
Describes and figures *Cimoliosaurus* (*Elasmosaurus?*) *snowi*.
Noticed by Cope, Amer. Naturalist, xxv, p. 653.
- 1891 A
Kansas mosasaurs.
Science, xviii, p. 345.
- 1891 B
The skull and hind extremity of *Pteranodon*.
Amer. Naturalist, xxv, pp. 1124-1126.
- 1892 A
Kansas pterodactyls. Part I.
Kansas Univ. Quarterly, i, pp. 1-13, pl. i.
Contains list of species, with description of the osteology of *Pteranodon* and *Nyctodactylus*.
A brief abstract of this paper is found in Amer. Naturalist, xxvii, p. 37.
- 1893 A
An interesting food habit of the plesiosaurs.
Trans. Kansas Acad. Sci., xiii, pp. 121-122, with plate.
Refers to the occurrence of pebbles in the stomachs of plesiosaurs.
- 1893 B
Kansas pterodactyls. Part II.
Kansas Univ. Quarterly, ii, pp. 79-81, with 1 fig. in the text.
- 1893 C
Kansas mosasaurs. Part II. Restoration of *Clidastes*.
Kansas Univ. Quarterly, ii, pp. 83-84, with pl. iii.

Williston, S. W.—Continued. 1894 A
A food habit of the plesiosaurs.
Amer. Naturalist, xxviii, p. 50.
Extract from Trans. Kansas Acad. Sci., xiii,
p. 121.

1894 B
Vertebrate remains from the lower-
most Cretaceous.
Kansas Univ. Quarterly, iii, pp. 1-4, with
pl. i.

1894 C
Restoration of *Platygonus*.
Kansas Univ. Quarterly, iii, pp. 23-39, with
pls. vii, viii, and 7 text figs.
Notice of, by M. Schlosser, in Archiv f.
Anthrop., xxiv, p. 171.

1894 D
A new turtle from the Benton Cre-
taceous.
Kansas Univ. Quarterly, iii, pp. 5-18, with
pls. ii-iv, with 9 text-figs.
Describes as belonging to new family, genus,
and species, *Desmatochelys lowii*.

1894 E
Restoration of *Aceratherium fossiger*
Cope.
Kansas Univ. Quarterly, ii, pp. 289-290, pl.
viii.

1894 F
A new Dicotyline mammal from the
Kansas Pliocene.
Science, xxiii, p. 164.
Describes *Dicotyles leptorhinus* Williston.

1895 A
New or little-known extinct verte-
brates.
Kansas Univ. Quarterly, iii, pp. 165-176.
Abstract by M. Schlosser in Archiv f.
Anthrop., xxv, p. 183.

1895 B
Note on the mandible of *Ornithostoma*.
Kansas Univ. Quarterly, iv, p. 61.

1896 A
On the dermal coverings of *Hespero-*
ornis.
Kansas Univ. Quarterly, v, pp. 53-54, with
pl. ii.

1896 B
On the skull of *Ornithostoma*.
Kansas Univ. Quarterly, iv, pp. 195-197, with
pl. i.
Ornithostoma is adopted instead of *Pterano-*
don Marsh.

1897 A
Restoration of *Ornithostoma* (*Pter-*
anodon).
Kansas Univ. Quarterly, vi, pp. 35-51, with
pl. ii, and 4 figs. in the text.

Williston, S. W.—Continued. 1897 B
Notice of some vertebrate remains
from the Kansas Permian.
Kansas Univ. Quarterly, vi, pp. 53-56, with
2 figs. in the text.
See also Science (2), v, p. 395, and Trans.
Kansas Acad. Sci., xv, pp. 120-122.

1897 C
A new plesiosaur from the Kansas
Comanche Cretaceous.
Kansas Univ. Quarterly, vi, p. 57.
Description of *Plesiosaurus gouldii* n. sp.

1897 D
Brachysaurus, a new genus of mos-
saurs.
Kansas Univ. Quarterly, vi, pp. 95-98, with
pl. vii.
Description of *Brachysaurus overtoni* gen. et
sp. nov.

1897 E
On the extremities of *Tylosaurus*.
Kansas Univ. Quarterly, vi, pp. 99-102, with
pls. ix-xii, and 1 fig. in the text.
One of the plates shows the scaled condition
of the skin of *Tylosaurus*.

1897 F
Range and distribution of the mos-
saurs, with remarks on synonymy.
Kansas Univ. Quarterly, vi, pp. 177-185,
with pl. xx.

1897 G
A new labyrinthodont from the Kan-
sas Carboniferous.
Kansas Univ. Quarterly, vi, pp. 209-210,
with pl. xxi.

1897 H
The Kansas Niobrara Cretaceous.
Univ. Geol. Surv. Kansas, ii, pp. 235-246.
Contains a brief account of the genera of
vertebrates found in this group of deposits.

1897 I
The Pleistocene of Kansas.
Univ. Geol. Surv. Kansas, ii, pp. 299-308,
with pls.

1897 J
Restoration of Kansas Mosasaurs.
Kansas Univ. Quarterly, vi, A, pp. 107-110,
with pl. xiii.

1898 A
Restoration of Kansas Cretaceous
animals.
Kansas Univ. Quarterly, vii.
Frontispiece restoration of *Clidastes* is given.

1898 B
Birds.
Univ. Geol. Surv. Kansas, iv, pp. 43-53, with
pls. v-viii.
This is a synopsis of the fossil birds of
Kansas.

- Williston, S. W.—Continued.** 1898 C
Dinosaurs.
 Univ. Geol. Surv. Kansas, iv, pp. 67-70, with pl. ix.
 A brief exposition of the characters of the group and a plate of *Claosaurus annectens*, to illustrate the structure of the Kansan species, *C. agilis*.
- 1898 D
Crocodiles.
 Univ. Geol. Surv. Kansas, iv, pp. 75-78, with 2 figs. in the text.
- 1898 E
Mosasaurs.
 Univ. Geol. Surv. Kansas, iv, pp. 83-221, with pls. x-lxxii and 5 figs. in the text.
- 1898 F
The sacrum of *Morosaurus*.
 Kansas Univ. Quarterly, vii, pp. 173-175, with 2 figs. in the text.
- 1898 G
Miocene Edentates.
 Science (2), viii, p. 132.
 Shows that Cope's *Caryoderma snowianum* is a *Testudo*, possibly *T. undata* Cope.
- 1898 H
Editorial notes.
 Kansas Univ. Quarterly, vii, A, p. 235.
 Note on nuchal fringe and scales of *Platycarpus*.
- 1898 I
The Pleistocene of Kansas.
 Trans. Kansas Acad. Sci., xv, pp. 90-94.
 Presents an annotated list of the Pleistocene vertebrates found in Kansas. A reprint of Williston, S. W., 1897 I.
- 1898 J
Notice of some vertebrate remains from the Kansas Permian.
 Trans. Kansas Acad. Sci., xv, pp. 120-122.
- 1898 K
Saber-toothed cats.
 Pop. Sci. Monthly, liii, pp. 348-351, with 1 text-fig.
- 1899 A
Some additional characters of the mosasaurs. Contributions from the palæontological laboratory, No. 42.
 Kansas Univ. Quarterly, viii, A, pp. 39-41.
 Describes the episternum and nuchal fringe in *Platycarpus*. Also shows that the food is principally fishes.
- 1899 B
A new genus of fishes from the Niobrara Cretaceous.
 Kansas Univ. Quarterly, viii, pp. 113-115, with pl. xxvi.
- Williston, S. W.—Continued** 1899 C
The red-beds of Kansas.
 Science (2), ix, p. 221.
 Records the finding of *Eryops megacephalus* in the above beds.
- 1899 D
A new species of *Sagenodus* from the Kansas Coal-measures.
 Kansas Univ. Quarterly, viii, pp. 175-181, with pls. xxviii, xxxv-xxxvii.
- 1899 E
Notes on the coraco-scapula of *Eryops* Cope.
 Kansas Univ. Quarterly, viii, pp. 185-186, with pls. xxvii, xxix, xxx.
- 1900 A
Some fish-teeth from the Kansas Cretaceous.
 Kansas Univ. Quarterly, ix, pp. 27-42, with pls. vi-xiv.
- 1900 B
Cretaceous fishes [of Kansas]. Sclerichians and Pycnodonts.
 Univ. Geol. Surv. Kansas, vi, pp. 237-256, with pls. xxiv-xxxii.
 This is a reprint of the preceding paper.
- Williston, S. W., and Case, E. C.** 1892 A
Kansas mosasaurs.
 Kansas Univ. Quarterly, i, pp. 15-32, with pls. ii-vi.
 Gives list of species and describes the osteology of *Clidastes velox* and *C. westii* n. sp.
- 1898 A
Turtles. Introduction, and *Desmatochelys*, by S. W. Williston. *Toxochelys*, by E. C. Case.
 Univ. Geol. Surv. Kansas, iv, pp. 349-387, with pls. lxxiii-lxxxiv, with 1 series of text figs.
- Willett, Henry.**
 See **Etheridge and Willett.**
- Wilson, J. T., and Hill, J. P.** 1897 A
Observations upon the development and succession of the teeth in *Perameles*, together with a contribution to the discussion of the homologies of the teeth in marsupial animals.
 Quart. Jour. Micros. Sci. (2), xxxix, pp. 427-588, with pls. xxv-xxxii.
- Wilson, Thomas.** 1892 A
Man and the *Myiodon*.
 Amer. Naturalist, xxvi, pp. 628-631.
 Presents results of chemical analysis of bones of man and *Myiodon*, found together.

- Winchell, Alex.** 1863 A
Description of elephantine molars in the museum of the University of Michigan.
Canadian Naturalist, 1863, viii, pp. 398-400.
- 1864 A
Notice of the remains of a mastodon recently discovered in Michigan.
Amer. Jour. Sci. (2), xxxviii, pp. 223-224.
See also Canadian Naturalist, 1893, p. 398.
- Winckler, T. C.** 1869 A
Des tortues fossiles conservées dans le Musée Teyler et dans quelques autres musées.
Arch. Mus. Teyler, ii, pp. i-ii; 1-151, with pls. i-xxxiii.
- 1871 A
Mémoire sur le *Cœlacanthus harlemensis*.
Arch. Mus. Teyler, iii, pp. 101-116, with pl. iv.
Notice and review of, by W. D[awkins] in Geol. Magazine, 1872, pp. 31-32.
- 1873 A
Le *Plesiosaurus dolichodeirus* Conyb.
Arch. Mus. Teyler, iii, pp. 219-233, with pl. vi, and 10 figs. in the text.
- 1874 A
Le *Pterodactylus kochii* Wagn. du Musée Teyler.
Archiv. Mus. Teyler, iii, pp. 377-387, with pl. vii.
- 1874 B
Mémoire sur des dents de poissons du terrain bruxellian.
Arch. Mus. Teyler, iii, pp. 295-304, with pl. vii.
- Windle, B. C. A., and Humphreys, John.** 1887 A
On man's lost incisors.
Report Brit. Assoc. Adv. Sci., 56th meeting, Birmingham, 1886, pp. 688-691.
Abstract; full paper in Jour. Anat. and Physiol., xxi, p. 84.
- Winge, Herluf.** 1888 A
Jordfundne og nulevende Gnavere (*Rodentia*) fra Lagoa Santa, Minas Geraes, Brasilien.
E Museo Lundii, i, Art. iii, pp. 1-200, with pls. i-viii.
Abstract of, by M. Schlosser, in Archiv f. Anthrop., xix, pp. 89-90.
- 1893 A
Jordfundne og nulevende Flagermus (*Chiroptera*) fra Lagoa Santa, Minas
- Winge, Herluf—Continued.**
Geraes, Brasilien. Med Udsigt over Flagermusenes indbyrdes Slægtskab.
E Museo Lundii, ii, pp. 1-65, with pls. 1, ii. Kjöbenhavn, 1893.
Abstract of, by M. Schlosser, in Archiv f. Anthrop., xxiv, pp. 142-143.
- 1893 B
Chauves-souris fossiles et vivantes de Lagoa Santa, Minas Geraes, Brésil.
E Museo Lundii, ii, pp. 67-92.
- 1893 C
Jordfundne og nulevende Pungdyr (*Marsupialia*) fra Lagoa Santa, Minas Geraes, Brasilien. Med Udsigt over Pungdyrenes Slægtskab.
E Museo Lundii, ii, pt. ii, pp. 1-132, with pls. i-iv.
Abstract of, by M. Schlosser, in Archiv f. Anthrop., xxiv, pp. 143-145.
- 1895 A
Jordfundne og nulevende Aber (*Primates*) fra Lagoa Santa, Minas Geraes, Brasilien. Med Udsigt over Abernes indbyrdes Slægtskab.
E Museo Lundii, ii, pt. iii, pp. 1-45, with pls. i-ii.
Abstract of, by M. Schlosser, in Archiv f. Anthrop., xxv, pp. 238-239.
- 1895 B
Jordfundne og nulevende Rovdyr (*Carnivora*) fra Lagoa Santa, Minas Geraes, Brasilien. Med Udsigt over Rovdyrenes indbyrdes Slægtskab.
E Museo Lundii, ii, pt. iv, pp. 1-103, with pls. i-viii. Kjöbenhavn, 1895.
Notice of this paper by M. Schlosser in Neues Jahrb. Mineral., 1899, ii, pp. 144-147, and in Archiv f. Anthrop., xxv, pp. 239-241.
- Winslow, C. F.** 1857 A
Letter on finding human remains and those of elephant and mastodon in California.
Proc. Boston Soc. Nat. Hist., vi, p. 278.
- 1868 A
On human remains along with those of the mastodon in the drift of California.
Amer. Jour. Sci. (2), xlvi, pp. 407-408.
Taken from Proc. Boston Soc. Nat. Hist., vi, 1857, p. 278.
- Wislizenus, A.** 1858 A
Was man contemporaneous with the mastodon?
Trans. Acad. Sci. St. Louis, i, pp. 168-171.

- Wistar, Caspar.** 1799 A
A description of the bones deposited by the president in the museum of the society, and represented in the annexed plates.
Trans. Amer. Philos. Soc., iv, pp. 526-531, with 2 pls.
Description of bones of *Megalonyx* deposited by the president of the society, Thomas Jefferson.
- 1818 A
An account of two heads found in the morass called the Big Bone Lick and presented to the society by Mr. Jefferson.
Trans. Amer. Philos. Soc. (2), i, pp. 375-380, with pls. x, xi.
Mentions bones of mammoth and mastodon, and figures bones of extinct deer and ox.
- Woodhull, Alfred A.** 1872 A
On the elephant in Colorado.
Amer. Jour. Sci. (3), iii, p. 374.
Reports occurrence of *E. americanus* in Colorado.
- Woodward, A. S.** 1884 A
Chapter on fossil sharks and rays.
Hardwicke's Science-Gossip, xx, pp. 172-174; 227-230; 267-272, with figs. 99-101; 129-143; 161-177.
- 1885 A
On the literature and nomenclature of British fossil *Crocodylia*.
Geol. Magazine (3), ii, pp. 496-510.
Contains a list of papers on the subject.
- 1885 B
Chapters on fossil sharks and rays.
Hardwicke's Science-Gossip, xxi, pp. 106-109; 154-156; 226-229; 270-272, with figs. 71-84; 101-111; 155-161; 181-188.
These articles form a continuation of the paper 1884 A. 1886 E is the conclusion.
- 1886 A
On the relations of the mandibular and hyoid arches in a Cretaceous shark (*Hybodus dubrisiensis* Mackie).
Proc. Zool. Soc. Lond., 1886, pp. 218-224, pl. xx.
- 1886 B
Note on the presence of a columella (epipterygoid) in the skull of *Ichthyosaurus*.
Proc. Zool. Soc. Lond., 1886, pp. 405-408, woodcuts 1-4.
- 1886 C
On the palæontology of the selachian genus *Notidanus*.
Geol. Magazine (3), iii, pp. 205-217; 253-259, with pl. vi and 2 figs. in the text.
- Woodward, A. S.—Continued.** 1886 D
The history of fossil crocodiles.
Proc. Geologists' Assoc., ix, pp. 288-344, with 25 figs. in the text.
- 1886 E
Chapters on fossil sharks and rays.
Hardwicke's Science-Gossip, xxii, pp. 4-6, with figs. 1, 2.
This forms the conclusion of the papers of this author designated 1884 A and 1885 B.
- 1887 A
On the presence of a canal system, evidently sensory, in the shields of Pteraspidian fishes.
Proc. Zool. Soc. Lond., 1887, pp. 478-481, with 1 woodcut.
- 1887 B
On the dentition and affinities of the selachian genus *Ptychodus* Agassiz.
Quart. Jour. Geol. Soc., xliii, pp. 121-131, with pl. x.
- 1887 C
On "leathery turtles," recent and fossil, and their occurrence in British Eocene deposits.
Proc. Geologists' Assoc., x, pp. 2-14.
Contains numerous references to the literature of the subject.
- 1888 A
[Note on J. S. Newberry's paper "On the structure and relations of *Edestus*, with a description of a gigantic new species," published in Ann. N. Y. Acad. Sci., v, 1888, pp. 1-10.]
Geol. Magazine (3), v, p. 374.
- 1888 B
Note on Prof. W. Dames's "Die Gattung *Saurodon*," published in Sitzungsber. Ges. naturf. Freunde, Berlin, 1887.
Geol. Magazine (3), v, p. 158.
- 1888 C
M. Charles Brongniart on *Pleuranthus*.
Geol. Magazine (3), v, pp. 422-425.
Review of paper published in Comptes rend. Acad. Sci. Paris, April 23, 1888.
- 1888 D
Note on the occurrence of a species of *Onychodus* in the lower Old Red sandstone passage beds of Ledbury, Herefordshire.
Geol. Magazine (3), v, pp. 500-501.

Woodward, A. S.—Continued. 1888 E
Dr. Anton Fritsch on *Ctenodus* and other Palæozoic fishes.

Geol. Magazine (3), v, pp. 523-526.

A review of Fauna der Gaskohle, etc., Bd. ii, Heft 3, pp. 65-92.

1888 F

Notes on the determination of the fossil teeth of *Myliobatis*, with a revision of the English Eocene species.

Ann. and Mag. Nat. Hist. (6), i, pp. 36-47, with pl. i.

1888 G

On the fossil fish-spines named *Cœlorhynchus*, Agassiz.

Ann. and Mag. Nat. Hist. (6), ii, pp. 223-226.

1888 H

On some remains of the extinct selachian *Asteracanthus* from the Oxford clay of Peterborough, preserved in the collection of Alfred N. Leeds, esq., of Eyebury.

Ann. and Mag. Nat. Hist. (6), ii, pp. 336-342, with pl. xii.

Strophodus probably referable to *Asteracanthus*.

1888 I

A synopsis of the vertebrate fossils of the English Chalk.

Proc. Geologists' Assoc., x, pp. 273-338, with pl. i.

1888 J

On a head of *Hybodus delabechei*, associated with dorsal fin-spines, from the Lower Lias of Lyme Regis, Dorsetshire.

Annual Report Yorkshire Philos. Soc., 1888, pp. 58-61, with pl. i.

1889 A

A comparison of the Cretaceous fish-fauna of Mount Lebanon with that of the English Chalk.

Report Brit. Assoc. Adv. Sci., 58th meeting, Bath, 1888, p. 678.

1889 B

Remarks on *Sclerorhynchus atavus*.

Proc. Zool. Soc. Lond., 1889, pp. 449-451, with 1 woodcut.

Describes an extinct saw-fish from Mount Lebanon.

1889 C

Note on *Bucklandium diluvii*, König, a siluroid fish from the London clay of Sheppey.

Proc. Zool. Soc. Lond., 1889, pp. 208-210, with pl. xxii.

Woodward, A. S.—Continued. 1889 D
Catalogue of the fossil fishes in the British Museum. Part I. Containing the *Elasmobranchii*.

London, 1889, pt. 1, pp. i-xlvi; 1-474, pls. i-xvii, woodcuts 13.

See notice of this volume in Geol. Magazine, vi, 1889, p. 366.

1889 E

Prof. Dr. Von Zittel on palæichthyology.

Geol. Magazine (3), vi, pp. 125-130; 177-181; 227-232.

A review of Dr. Zittel's Handbuch der Palæontologie.

1889 F

Palæichthyological notes. I. On the so-called *Hybodus keuperinus*, Murch. & Strickl. II. On *Diplodus moorei*, sp. nov., from the Keuper of Somersetshire. III. On a symmetrical Hybodont tooth from the Oxford clay of Peterborough. IV. On a maxilla of *Saurichthys* from the Rhætic of Aust Cliff, near Bristol.

Ann. and Mag. Nat. Hist. (6), iii, pp. 297-302, with pl. xiv.

1889 G

Acanthodian fishes from the Devonian of Canada.

Ann. and Mag. Nat. Hist. (6), iv, pp. 183-184.

1889 H

On the palæontology of sturgeons.

Proc. Geologists' Assoc., xi, pp. 24-44, with pl. i, and 13 figs. in the text.

1890 A

Vertebrate palæontology in some American and Canadian museums.

Geol. Magazine (3), vii, pp. 390-395; 455-460.

1890 B

A new theory of *Pterichthys*.

Ann. and Mag. Nat. Hist. (6), vi, pp. 314-316.

Notice of paper by W. Patten in Quart. Jour. Micros. Sci., xxxi, 1890, pp. 317-378.

1890 C

A synopsis of the fossil fishes of the English lower Oolites.

Proc. Geologists' Assoc., xi, pp. 285-306, with pl. iii.

1890 D

The fossil fishes of the Hawkesbury series at Gosford, New South Wales.

Mem. Geol. Surv. N. S. Wales, Palæont., No. 4, pp. 1-55, with pls. i-x. Sydney, 1890.

Abstract in Ann. and Mag. Nat. Hist. (6), vi, p. 423.

Woodward, A. S.—Continued. 1891 A
Catalogue of the fossil fishes in the
British Museum. Part II. Containing
the *Elasmobranchii* (*Acanthodii*), *Holo-*
cephali, *Ichthyodorulites*, *Ostracodermi*,
Dipnoi, and *Teleostomi* (*Crossopterygii*),
and chondrosteian *Actinopterygii*.

Pp. i-xliv; 1-567, pls. i-xvi and 57 text figs.

1891 B

Dr. Anton Fritsch on Palæozoic
elasmobranch fishes.

Geol. Magazine (3), viii, pp. 375-378, with 2
figs.

A review of Dr. Fritsch's *Fauna der Gas-*
kohle, etc.

1891 C

Armored palæozoic sharks.

Geol. Magazine (3), viii, pp. 422-425.

A review of three of Dr. Otto Jaekel's papers
on Elasmobranchs.

1891 D

Review of "Pineal fontanelle of Pla-
codermis and catfish" by Bashford
Dean in 19th Report of the Commis-
sioners of Fisheries of N. Y., 1891.

Geol. Magazine (3), viii, p. 513.

1892 A

On the Lower Devonian fish-fauna
of Campbelltown, New Brunswick.

Geol. Magazine (3), ix, pp. 1-6, pl. i.

Describes *Protodus jexi* gen. et spec. nov.,
Diplodus problematicus sp. nov., *Gyracanthus*
incurvus, *Acanthodes semistriatus*, *Cephalaspis*
campbelltonensis, *Phlyctenaspis acadica*.

1892 B

Palæozoic fishes.

Geol. Magazine (3), ix, pp. 233-235.

Review of Professor Cope's "On the char-
acters of some Palæozoic fishes" and Rohon's
"Ueber *Pterichthys*."

1892 C

Further contributions to knowledge
of the Devonian fish-fauna of Canada.

Geol. Magazine (3), ix, pp. 481-485; pl. xiii,
and 1 fig. in text.

Treats of *Phlyctenaspis acadica*, *Diplacanthus*
horridus, sp. nov., *Coccosteus canadensis*, sp.
nov., and *Bothriolepis*.

1892 D

On the skeleton of a Chimæroid fish
(*Ischyodus*) from the Oxford clay of
Christian Malford, Wiltshire.

Ann. and Mag. Nat. Hist. (6), ix, pp. 94-96.

1892 E

The evolution of fins.

Natural Science, i, pp. 28-35, with 8 figs. in
the text.

Woodward, A. S.—Continued. 1892 F
The forerunners of the backboneed
animals.

Natural Science, i, pp. 596-602, with 10 figs.

1892 G

The evolution of shark's teeth.

Natural Science, i, pp. 671-675, with 12 figs.
in the text.

1893 A

On the cranial osteology of the Meso-
zoic ganoid fishes, *Lepidotus* and *Dape-*
dus.

Geol. Magazine (3), x, pp. 413-414.

See Woodward, A. S., 1893 D.

1893 B

The fossil fishes of the British Coal-
measures.

Geol. Magazine (3), x, pp. 72-74.

A review of James W. Davis's paper on *Pleu-*
racanthidæ in Trans. Roy. Dublin Soc., iv, pp.
703-748, 1892.

1893 C

Note on a case of subdivision of the
median fin in a dipnoan fish.

Ann. and Mag. Nat. Hist. (6), xi, pp. 241-
242, with 1 fig. in the text.

Describes method of separation of the anal
fin of *Phaneropleuron curtum* from the caudal
by fusion of the axonosts.

1893 D

On the cranial osteology of the
Mesozoic ganoid fishes, *Lepidotus* and
Dapedius.

Proc. Zool. Soc. Lond., 1893, pp. 559-565, with
pls. xlix and l, and 6 figs. in the text.

1893 E

Note on the evolution of the scales
of fishes.

Natural Science, iii, pp. 448-450, with figures.

1894 A

On the affinities of the Cretaceous
fish *Protosphyraena*.

Ann. and Mag. Nat. Hist. (6), xiii, pp.
510-512.

Shows the close relationships existing be-
tween *Protosphyraena* and *Hypsocormus*.

1894 B

Note on a tooth of *Oxyrhina* from the
Red Crag of Suffolk.

Geol. Magazine (4), i, pp. 75-76, with 2 figs.
in the text.

Refers to the finding of *Oxyrhina crassa*.

1895 A

Catalogue of the fossil fishes in the
British Museum. Part III. Contain-

Woodward, A. S.—Continued.

ing the actinopterygian *Teleostomi* of the order *Chondrostei* (concluded), *Protospondyli*, *Aëthospondyli*, and *Isospondyli* (in part).

Pp. i-xliii, 1-544, pls. i-xviii, text figs. 45.

Review of, by R. H. Traquair in *Geol. Magazine*, 1896, p. 124.

1895 B

The problem of the primeval sharks.

Natural Science, vi, pp. 38-43, with 3 figs. in the text.

1895 C

On two deep-bodied species of the clupeoid genus *Diplomystus*.

Ann. and Mag. Nat. Hist. (6), xv, pp. 1-3, with pl. i, figs. 1-4.

Describes and figures *Diplomystus longicostatus* and describes *D. birdi* n. sp.

1895 D

On the fossil fishes of the Upper Lias of Whitby. Part I.

Proc. Yorkshire Geol. and Polytech. Soc. (2), xiii, pp. 25-42, with pls. iii-v.

Leptolepis saltviciensis, *Pholidophorus germanicus*, *Eugnathus fasciculatus*, and *Ptycholepis bollensis* are described and figured.

1895 E

The fossil fishes of the Talbragar beds (Jurassic?).

Mem. Geol. Surv. N. S. Wales, Palæont., No. 9, pp. 1-29, with pls. i-vi.

1896 A

Review of Bashford Dean's "Fishes, living and fossil."

Geol. Magazine (3), iii, pp. 135-139.

1896 B

On some extinct fishes of the Teleostean family *Goniorhynchidae*.

Proc. Zool. Soc. Lond., 1896, pp. 500-504, with pl. xviii.

1896 C

On some remains of the pycnodont fish *Mesturus*, discovered by Alfred N. Leeds, esq., in the Oxford Clay of Peterborough.

Ann. and Mag. Nat. Hist. (6), xvii, pp. 1-15, with pls. i-iii.

1897 A

On the fossil fishes of the Upper Lias of Whitby. Part II.

Proc. Yorkshire Geol. and Polytech. Soc. (2), xiii, pp. 155-170, with pls. xix-xxi.

Describes *Caturus* sp. indet. and 3 species of *Pachycormus*.

Woodward, A. S.—Continued. 1898 A

On the fossil fishes of the Upper Lias of Whitby. Part III.

Proc. Yorkshire Geol. and Polytech. Soc. (2), xiii, pp. 325-337, with pls. xlii-xlviii.

Describes and figures species of *Lepidotus*, and treats of their osteology.

1898 B

Outlines of vertebrate palæontology for students of zoology. By Arthur Smith Woodward, assistant keeper of the department of geology in the British Museum, Cambridge.

University Press, 1898, pp. i-xxiv; 1-470, with 228 figs. in the text.

Reviewed by H. F. Osborn in *Natural Science*, xiv, 1899, pp. 156-159.

1899 A

Notes on teeth of sharks and skates from the English Eocene formations.

Proc. Geologists' Assoc., xvi, pp. 1-14, with pl. i.

1899 B

On the fossil fishes of the Upper Lias of Whitby. Part IV.

Proc. Yorkshire Geol. and Polytech. Soc. (2), xiii, pp. 455-472, with pls. lxxvii, lxxix, and 13 text figs.

Describes and figures *Belonorhynchus acutus*, *B. brevirostris*, and *Gyrosteus mirabilis*.

1900 A

On some fish remains from the Parana formation, Argentine Republic.

Ann. and Mag. Nat. Hist. (7), vi, pp. 1-7, with pl. i.

1900 B

On a new ostracoderm (*Euphanerops longævus*) from the Upper Devonian of Scaumenac Bay, Province of Quebec, Canada.

Ann. and Mag. Nat. Hist. (7), v, pp. 416-418, with pl. x, figs. 1-1b.

1900 C

On a new species of *Deltodus* from the Lower Carboniferous (Yoredale rocks) of Yorkshire.

Ann. and Mag. Nat. Hist. (7), v, pp. 419-420, with pl. x, figs. 2-2b.

1900 D

Doctor Traquair on Silurian fishes.

Geol. Magazine (4), vii, pp. 66-72, with 4 figs. in the text.

A review of Traquair's Report on fossil fishes, etc., in *Trans. Roy. Soc. Edinburgh*, xxxix, pp. 827-864, pls. i-v, and 18 text-figs.

Woodward, A. S. and Sherborn, C. D.

1890 A

A catalogue of British fossil *Vertebrata*.

Pp. i-xxxv, 1-396. 8vo, London.

Table of contents: Introduction, p. v. Dates of publication of Agassiz's "Poisson fossiles," p. xxv. Dates of publication of Owen's "Odonotography," p. xxx. Table of the stratigraphical distribution of British fossil *Vertebrata*, p. xxx. Catalogue of British fossil *Vertebrata*, pp. 1-311. Addenda and Corrigenda, p. 395.

Woodward, Henry.

1869 A

Man and the mammoth; being an account of the animals associated with early man in prehistoric times.

Geol. Magazine (1), vi, pp. 58-72.

1871 A

Seeley on the *Ornithosauria*.

Nature, iv, p. 100.

A review of H. G. Seeley's two works, here designated as Seeley, H. G., 1869 A, and Seeley, H. G., 1870 A.

1874 A

New facts bearing on the inquiry concerning forms intermediate between birds and reptiles.

Report Brit. Assoc. Adv. Sci., 43d meeting, Bradford, 1873, pp. 93-94.

1874 B

New facts bearing on the inquiry concerning forms intermediate between birds and reptiles.

Quart. Jour. Geol. Soc., xxx, pp. 8-15.

1884 A

Ueber *Archæopteryx* von W. Dames.

Geol. Magazine (3), i, pp. 418-424, with pl. xiv.

A review of W. Dames's work in Palæont. Abhandl., ii, 1884, pp. 117-196.

1885 A

On an almost perfect skeleton of *Rhytina gigas* (*Rhytina stelleri*, Steller's sea-cow), obtained by Mr. Robert Damon, F. G. S., from the Pleistocene peat-bogs of Bering Island.

Quart. Jour. Geol. Soc., xli, pp. 457-472, with 5 figs. in the text.

Contains a list of works on *Sirenia*.

1885 B

Iguanodon mantelli Meyer.

Geol. Magazine (3), ii, pp. 10-15, with pl. i.

1885 C

On "wingless birds," fossil and recent; and a few words on birds as a class.

Geol. Magazine (3), ii, pp. 308-318.

Woodward, Henry—Continued. 1885 D

On the fossil *Sirenia* in the British Museum (Natural History), Cromwell Road, S. W.

Geol. Magazine (3), ii, pp. 412-425, with 2 figs. in the text.

1886 A

On a remarkable ichthyodorulite from the Carboniferous series, Gascoyne, Western Australia.

Geol. Magazine (3), iii, pp. 1-7, pl. i, and 5 figs. in the text.

Describes *Edestus davisi*.

1886 B

Prof. E. D. Cope on a new type of perissodactyl ungulate from the Wasatch Eocene of Wyoming Territory, United States of North America.

Geol. Magazine (3), iii, pp. 49-52, with pl. ii.

Extracts from Professor Cope's descriptions of *Phenacodus*.

1886 C

On "flightless birds," commonly called "wingless birds," fossil and recent; and a few words on birds as a class.

Proc. Geologists' Assoc., ix, pp. 352-376, with pls. i and ii, and 20 figs. in the text.

1894 A

Remarks on paper read by Dr. G. M. Dawson on elephant remains in Alaska.

Quart. Jour. Geol. Soc., l, p. 9.

1895 A

Note on the reconstruction of *Iguanodon* in the British Museum (Natural History), Cromwell Road.

Geol. Magazine (4) ii, pp. 289-292, pl. x, and 2 figs. in the text.

Woodward, M. F.

1892 A

On the milk dentition of *Procapra* (*Hyrax*) *capensis* and of the rabbit (*Lepus cuniculus*), with remarks on the relation of the milk and permanent dentition of the *Mammalia*.

Proc. Zool. Soc. Lond., 1892, pp. 38-49 with pl. ii.

1893 A

Contributions to the study of mammalian dentition. Part I. On the development of the teeth of the *Macropodidae*.

Proc. Zool. Soc. Lond., 1893, pp. 450-473, with pls. xxxv-xxxvii.

Appended is a list of references to papers by other authors.

Review by M. Schlosser in Archiv f. Anthropol., xxiv, p. 145.

Woodward, M. F.—Continued. 1894 A
On the milk dentition of the *Rodentia*, with a description of a vestigial milk incisor in the mouse (*Mus musculus*).

Anatom. Anzeiger, ix, pp. 619-631, with 3 figs. in the text.

1896 A
Contributions to the study of mammalian dentition. Part II. On the teeth of certain *Insectivora*.

Proc. Zool. Soc. Lond., 1896, pp. 557-594, with pls. xxiii-xxvi.

Appended is a list of references to 32 papers bearing on the subject.

An abstract in Archiv f. Anthrop., xxv, pp. 242-243.

1896 B
On the teeth of the *Marsupialia*, with especial reference to the pre-milk dentition.

Anatom. Anzeiger, xiii, pp. 281-291.

Review by M. Schlosser in Archiv f. Anthrop., xxv, pp. 243-244.

Woodworth, J. B. 1895 A
Three-toed dinosaur tracks in the Newark group at Avondale, N. J.

Amer. Jour. Sci. (3), 1, pp. 481-482.

1900 A
Vertebrate footprints on Carboniferous shales of Plainville, Mass.

Bull. Geol. Soc. America, xi, pp. 449-454, with pl. xl and 2 text-figs.

Records finding of batrachian footprints.

1900 B
Glacial origin of older Pleistocene in Gay Head cliffs, with note on fossil horse of that section.

Bull. Geol. Soc. Amer., xi, pp. 455-460, with pls. xli, xlii.

Records finding of an astragalus of *Equus* in reputed Miocene beds.

Woolworth, Samuel. 1847 A
Description of a tooth of the *Elephas americanus*.

Amer. Jour. Agricult. and Sci., vi, pp. 31-37, with 2 figs. in the text.

Worthen, A. H. 1857 A
On the occurrence of fish remains in the Carboniferous limestone of Illinois.

Proc. Amer. Assoc. Adv. Sci., 10th meeting, Albany, 1856, pp. 189-191.

1871 A
Vertical range of the mammoth and mastodon.

Amer. Naturalist, v, pp. 606-607.

See also **St. John and Worthen; Newberry and Worthen.**

Wortman, J. L. 1882 A
Remarks on *Ursus amplidens*.
Proc. Acad. Nat. Sci. Phila., 1882, pp. 286-288.

1882 B
On the origin and development of the existing horses.

Kansas City Review of Science and Industry, v, pp. 719-726, with figs. 1-6; vi, pp. 67-75, figs. 7-22.

1883 A
L'origine du cheval.
Revue Scientifique (3), v, pp. 705-714, with text-figs. 125-144.

1883 B
Remarks on *Galera macrodon*.
Amer. Naturalist, xvii, p. 1001.
Remarks made before Acad. Nat. Sci. Phila., April 26, 1883. These remarks do not appear in the "Proceedings" for that month.

1885 A
Cope's Tertiary *Vertebrata*.
Amer. Jour. Sci. (3), xxx, pp. 295-299.

1886 A
The comparative anatomy of the teeth of the *Vertebrata*.
8vo, pp. 351-504, with pls. i-vi and text figs. 189-268.

Reprinted from "The American System of Dentistry." Contains many figures of North American fossil vertebrates.

1890 A
Human and animal remains.
Amer. Naturalist, xxiv, pp. 592-594.
Contains directions for collecting and preserving fossil remains.

1893 A
On the divisions of the White River, or Lower Miocene, of Dakota.
Bull. Amer. Mus. Nat. Hist., v, pp. 95-105.
Contains a list of the genera characteristic of each of the different beds.

1893 B
A new theory of the mechanical evolution of the metapodial keels of *Diplarthra*.

Amer. Naturalist, xxvii, pp. 421-434, with 5 figs. in the text.

1894 A
Osteology of *Patriofelis*, a Middle Eocene creodont.

Bull. Amer. Mus. Nat. Hist., vi, pp. 129-164, with pl. i and 5 figs. in the text.

Reviewed by M. Schlosser in Archiv f. Anthrop., xxv, pp. 184-185.

- Wortman, J. L.**—Continued. 1894 B
On the affinities of *Leptarctus primus*
of Leidy.
Bull. Amer. Mus. Nat. Hist., vi, pp. 229-231.
- 1895 A
On the osteology of *Agriochærus*.
Bull. Amer. Mus. Nat. Hist., vii, pp. 145-178,
with pl. i and 24 figs. in the text.
Reviewed by M. Schlosser in Archiv f. Anthropol., xxv, p. 185.
- 1896 A
Species of *Hyracotherium* and allied
perissodactyls from the Wasatch and
Wind River beds of North America.
Bull. Amer. Mus. Nat. Hist., viii, pp. 81-110,
with pl. ii and 18 figs. in the text.
Remarks on, by M. Schlosser in Neues Jahrb.
Mineral., 1899, ii, pp. 139-142 and in Archiv f.
Anthropol., xxv, pp. 221-222.
- 1896 B
Psittacotherium, a member of a new
and primitive suborder of the *Edentata*.
Bull. Amer. Mus. Nat. Hist., viii, pp. 259-262.
The suborder *Ganodontia* established.
- 1897 A
[Abstract of remarks on *Ganodontia*,
made before New York Academy of
Sciences, Dec. 7, 1896.]
Science (2), v, p. 71.
- 1897 B
The *Ganodontia* and their relation-
ship to the *Edentata*.
Bull. Amer. Mus. Nat. Hist., ix, pp. 59-110,
with 36 figs. in the text.
Abstracts of this and Wortman, J. L., 1896 B,
by M. Schlosser in Archiv f. Anthropol., xxvi,
pp. 179-181.
- 1898 A
The extinct *Camelidæ* of North Amer-
ica, and some associated forms.
Bull. Amer. Mus. Nat. Hist., x, pp. 93-142,
with pl. xi and 23 text figs.
- 1899 A
Restoration of *Oxyæna lupina* Cope,
with descriptions of certain new species
of Eocene creodonts.
Bull. Amer. Mus. Nat. Hist., xii, pp. 139-148,
with pl. vii and 3 figs. in the text.
See also Cope and Wortman; Os-
born and Wortman.
- Wortman, J. L., and Earle, Charles.**
1893 A
Ancestors of the tapir from the Lower
Miocene of Dakota.
Bull. Amer. Mus. Nat. Hist., v, pp. 159-180,
with 7 text figs.
Notice in Amer. Naturalist, xxviii, p. 466.
- Wortman, J. L., and Matthew, W. D.**
1899 A
The ancestry of certain members of
the *Canidæ*, the *Viverridæ* and *Procy-
onidæ*.
Bull. Amer. Mus. Nat. Hist., xii, pp. 109-139,
with pl. vi and 10 text figs.
- Wright, Albert A.** 1893 A
On the ventral armor of *Dinichthys*.
Report Geol. Surv. Ohio, vii, pp. 620-626 with
pl. xliiv and 2 text figs.
- 1894 A
The ventral armor of *Dinichthys*.
Amer. Geologist, xiv, pp. 313-320, with pl.
ix and 2 text figs.
- Wright, R. R.** 1884 A
The relationship between the air
bladder and auditory organ in *Amblyurus*.
Zoolog. Anzeiger, vii, pp. 248-252.
- Wylie, T. A.** 1859 A
Teeth and bones of *Elephas primige-
nius*, lately found near the western fork
of White River, in Monroe County, Ind.
Amer. Jour. Sci. (2), xxviii, pp. 283-284.
- Wyman, Jeffries.** 1845 A
Communication on skeleton of *Hy-
drarchos sillimani*.
Proc. Boston Soc. Nat. Hist., ii, pp. 65-68.
Refers the skeleton shown by Dr. Koch to
Dorudon and probably to *Zeuglodon*.
- 1846 A
[Remarks on *Castoroides ohioensis*
found in Wayne County, N. Y.]
Proc. Boston Soc. Nat. Hist., ii, pp. 138-139.
- 1846 B
An anatomical description of the
cranium [of *Castoroides ohioensis*].
Boston Jour. Nat. Hist., v, pp. 391-401, with
pls. xxxvii-xxxix.
This constitutes a portion of a joint paper
by the above author and Dr. James Hall. See
Hall, James, 1846 B.
- 1850 A
Notice of fossil bones from the neigh-
borhood of Memphis, Tenn.
Amer. Jour. Sci. (2), x, pp. 56-64, with 5 figs.
in the text.
- 1850 B
Notice of remains of vertebrated ani-
mals found at Richmond, Va.
Amer. Jour. Sci. (2), x, pp. 228-235, with 1
page of figs.
- 1850 C
Remarks on teeth of fossil fishes from
Richmond, Va.
Proc. Boston Soc. Nat. Hist., iii, pp. 246-247.
Teeth belonging to genus *Phyllodus*.

Wyman, Jeffries—Continued. 1850 D
Remarks on finding of bones of *Megalonyx*, *Castor*, and *Castoroides* at Memphis, Tenn.

Proc. Boston Soc. Nat. Hist., iii, pp. 280-281.

1850 E

Remarks on zeuglodon bones shown by Dr. Durkee.

Proc. Boston Soc. Nat. Hist., iii, pp. 328-329.

1853 A

Description of the interior of the cranium and of the form of the brain of *Mastodon giganteus*.

Amer. Jour. Sci. (2), xv, pp. 48-55, with 3 outline figs.

1853 B

[Remarks on mastodon tooth found about 40 miles west of Chicago, and on teeth of mammoth.]

Proc. Boston Soc. Nat. Hist., iv, pp. 376-378.

1853 C

Notes on the reptilian remains.

Quar. Jour. Geol. Soc., ix, pp. 64-66, with pls. ii, iii.

Discusses the structure and relationships of the bones of *Dendroperon acadianum*.

1855 A

Notice of fossil bones from the red sandstone of the Connecticut Valley.

Amer. Jour. Sci. (2), xx, pp. 394-397.

No systematic names employed.

1855 B

Fossil footprints.

Proc. Boston Soc. Nat. Hist., v, p. 258. Also in Amer. Jour. Sci. (2), xxi, 1856, p. 446.

1855 C

Description of a portion of the lower jaw of *Mastodon andium* of Cuvier; also of a tooth and fragment of the femur of a mastodon, brought from Chile by Lieut. J. M. Gilliss, U. S. N.

Exec. Doc. No. 121, 33d Cong., 1st sess.: The U. S. Naval Astron. Exped. to the Southern Hemisphere during the years 1849-1852, Lieut. J. M. Gilliss, supt., vol. ii, pp. 275-281, with pls. xii, xiii.

1856 A

Account of some fossil bones collected in Texas.

Proc. Boston Soc. Nat. Hist., vi, pp. 51-55.

Describes some bones of *Elephas*, *Mastodon*, and *Megatherium*.

1857 A

Notes on the teeth of an elephant discovered near Zanesville, Ohio.

Proc. Amer. Assoc. Adv. Sci., 10th meeting, Albany, 1856, pp. 169-172.

Wyman, Jeffries—Continued. 1857 B

On a batrachian reptile from the Coal formation.

Proc. Amer. Assoc. Adv. Sci., 10th meeting, Albany, 1856, pp. 172-173.

For more complete descriptions and names of the species, see Wyman, J. 1858 A.

1858 A

On some remains of batrachian reptiles discovered in the Coal formation of Ohio, by Dr. J. S. Newberry and C. M. Wheatley.

Amer. Jour. Sci. (2), xxv, pp. 158-163, with 2 figs. in the text.

Abstract in Zeitschr. gesamt. Naturwiss., xiii, pp. 71-72, 1859.

1860 A

Exhibition of skull of capybara found fossil on the southwestern frontier of the United States.

Proc. Boston Soc. Nat. Hist., vii, p. 350.

1862 A

Observations upon the remains of extinct and existing species of *Mammalia* found in the crevices of the lead-bearing rocks and in the superficial accumulations within the lead region of Wisconsin, Iowa, and Illinois.

J. D. Whitney's Report Geol. Surv. Upper Miss. Lead Region, pp. 421-423.

1867 A

Remarks on finding of bones of great auk on Goose Island, Casco Bay.

Proc. Boston Soc. Nat. Hist., xi, pp. 301-303.

1872 A

The osteology and myology of *Didelphys virginiana*, with an appendix on the brain.

Mem. Boston Soc. Nat. Hist., ii, pp. 41-154, with 36 figs. in the text.

Yates, L. G.

1874 A

Fossil elephant and mastodon in California.

Amer. Jour. Sci. (3), viii, p. 143.

1874 B

Letter relating to mammalian fossils in California.

Proc. Acad. Nat. Sci. Phila., 1874, pp. 18-21.

Young, John.

1866 A

On the affinities of *Platysomus* and allied genera.

Quart. Jour. Geol. Soc., xxii, pp. 301-317, with pls. xx, xxi, and 4 figs. in the text.

Restriction and definition of *Platysomus* Ag.

- Young, John**—Continued. 1866 B
Notice of new genera of Carboniferous *Glyptodipterines*.
Quart. Jour. Geol. Soc., xxii, pp. 596-608, with 8 figs. in the text.
Defines *Rhizodus* Owen.
- Zigno, A. de.** 1887 A
Quelques observations sur les siréniens fossiles.
Bull. Soc. Géol. France (3), xv, pp. 728-732, pl. xxvii.
- Zilliken, J. E.** 1879 A
Die Entstehung des Kamelhöckers.
Kosmos, vi, pp. 143-145.
- Zittel, Karl A.** 1882 A
Ueber Flugsaurier aus dem lithographischen Schiefer Bayerns.
Paläontographica, xxix, 47-81, with pls. x-xiii (i-iv).
- 1886 A
Ueber *Ceratodus*.
Sitzungsber. k. p. Akad. Wissensch. München., 1886, pp. 253-261, with plate.
- 1890 A
Handbuch der Paläontologie. I. Abth. Paläozoologie. III Band. *Vertebrata (Pisces, Amphibia, Reptilia, Aves)*.
Pp. i-xii; 1-900, with 719 illus. Munich and Leipsic, 1887-1890.
Pp. i-xii; 1-256 were issued in 1887; pp. 257-436 in 1888; pp. 437-632 in 1889; pp. 633-900 in 1890.
- Zittel, Dr. Karl A.**—Continued. 1893 A
The geological development, descent, and distribution of the *Mammalia*.
Geol. Magazine (3), x, pp. 401-412, 455-468, 501-514.
- 1893 B
Handbuch der Paläontologie. I. Abth. Paläozoologie. IV Band. *Vertebrata (Mammalia)*.
Pp. i-xi, 1-799, with 590 figs. in the text.
Munich and Leipsic, 1891-1893.
- 1896 A
Fossil fishes in the British Museum.
Natural Science, viii, pp. 408-413.
A review of the first three volumes of A. S. Woodward's "Catalogue of the fossil fishes in the British Museum."
- Zograf, N.** 1896 A
Note sur l'odontographie des Ganoïdei Chondrostei.
Ann. Sci. Naturelles (8) Zool., i, pp. 197-219, with pls. iv, v.
- Zwick, Wilhelm.** 1897 A
Beiträge zur Kenntniss des Baues und der Entwicklung der Amphibien-gliedmassen, besonders von Carpus und Tarsus.
Zeitschr. wissenschaft. Zool., lxiii, pp. 62-114, with pls. iv, v.
A list of the principal memoirs and papers dealing with the subject is appended.

ADDENDUM.

- Ballou, William H.** 1898 A
The serpent-like sea saurians.
Pop. Sci. Month., liii, pp. 209-225, with 2 pls. and 6 text figs.
- Baur, G.** 1892 D
Der Carpus der Schildkröten.
Anatom. Anzeiger, vii, pp. 206-211, with figs. 1-4.
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TABULAR KEY TO CATALOGUE.

Class ELASMOBRANCHII.

Subclass.	Superorder.	Order.	Suborder.	Superfamily.	Family.	Page.
Plagiostomata.....	Ichthyotomi.....	Pleuracanthides			{Pleuracanthidæ.....	263
					{Cladodontidæ.....	267
					{Cladodactylidæ.....	272
		Pleuropterygia			{Acanthoïssidæ.....	273
					{Diplacanthidæ.....	274
		Acanthodii		Petalodontioidea	{Petalodontidæ.....	275
					{Psammodontidæ.....	284
					{Cochliodontidæ.....	286
				Heterodontioidea	{Orodontidæ.....	295
					{Heterodontidæ.....	298
					{Hexanchidæ.....	300
			(Squali		{Lamnidæ.....	301
					{Scylliorhinidæ.....	310
					{Galeidæ.....	310
Holocephala.....	Aristosclachii	Selacha		Squaloidea	{Somniosidæ.....	314
					{Tamiobatidæ.....	315
					{Pachyura.....	315
					{Rajidæ.....	316
					{Pristidæ.....	317
					{Psychodontidæ.....	317
					{Dasysatridæ.....	318
					{Myllobatidæ.....	319
					{Mantidæ.....	321
					{Ptychodontidæ.....	322
					{Chimeridæ.....	323
				Chimæroidea		

ICHTHYODORULITES (p. 326).

Class PISCES.

[illegible]

Class PISCES—Continued.

Subclass.	Superorder.	Order.	Suborder.	Superfamily.	Family.	Page.
Teleostomi	Actinopteri	Isospondyli			Pholidophoridae	383
					Chirocentridæ	383
					Stratodontidæ	387
					Pachyrhizodontidæ	387
		Plectospondyli			Enchodontidæ	388
					Albulidæ	390
					Clupeidæ	390
					Salmonidæ	392
					Gonorynchidæ	392
		Phthinobranchii			Osteoglossidæ	393
					Cyprinidæ	394
					Percetidæ	396
					Gasterosteidæ	397
					Syngnathidæ	398
					Hippocampidæ	398
					Lucidæ	398
					Picclidæ	398
					Esocidæ	399
					Hemirhamphidæ	399
					Scomberesocidæ	400
					Mugilidæ	400
					Sphyranidæ	401
					Chaetodontidæ	402
					Labridæ	402
					Pomacentridæ	403
		Percomorphi			Berycidæ	403
					Xiphiidæ	403
					Trichaluridæ	403
					Carangidæ	403

Teleostomi.....	Actinopteri.....	Percomorphi.....	403
		{.....	
		{Percoidae.....	404
		{Sparidae.....	405
		{Sciaenidae.....	405
		{Scorpenoidae.....	406
		{Cottoidae.....	406
		{Cyclopteroidae.....	407
		{Balistidae.....	407
		{Ostracidae.....	
		{Diodontidae.....	408
		{Sclerodermi.....	
		{Ostracodermi.....	
		{Gymnodontes.....	
		{Diodontoidae.....	

Class BATRACHIA.

[illegible]

Class REPTILIA.

Subclass.	Superorder.	Order.	Suborder.	Superfamily.	Family.	Page.
		Cotylosauria.....			{ Diacridia.....	426
					{ Pariotichia.....	428
					{ Pareiasauridæ.....	429
		Chelydrosauria.....			Otocelidæ.....	429
		Anomodontia.....			Dicynodontidæ.....	430
		Pelycosauria.....			{ Clepsydropsidæ.....	431
					{ Bolosauridæ.....	434
			Athere.....		Dermochelyidæ.....	436
					Pleurosternidæ.....	437
				Pleurodira.....	{ Pelomedusidæ.....	438
					{ Plesiochelyidæ.....	439
					{ Protostegidæ.....	439
			Thecophora.....		{ Thalassemydidæ.....	440
					Toxochelyidæ.....	442
					Desmatochelyidæ.....	442
		Testudines.....			{ Chelonidæ.....	443
				Cryptodira.....	{ Adocidæ.....	444
					{ Chelydridæ.....	446
					{ Anosteiridæ.....	446
					{ Emydidæ.....	447
					{ Testudinidæ.....	449
					{ Plastronemidæ.....	452
			Trionychia.....		{ Trionychidæ.....	453
					{ Plesiosauridæ.....	455
					{ Elasmosauridæ.....	457
		Plesiosauria.....			Champsosauridæ.....	460
		Rhynchocephalia.....			{ Proteosauridæ.....	462
		Ichthyosauria.....			{ Bapianodontidæ.....	463

Squamata	Pythonomorpha	Mosasauroidea	464
		Iguanidae	471
		Anguidae	474
		Varanidae	476
		Amphisbaenidae	476
	Rhoptoglossi	Chamaeleonidae	478
		Palaeophidae	479
		Boidae	480
	Serpentes	Colubridae	482
		Crotalidae	484
Dinosauria	Opisthocelia	Mosasauroidea	486
		Atlantosauridae	487
		Diplodocidae	491
		Megalosauridae	492
		Anchisauridae	493
	Theropoda	Cœluridae	494
		Ceratosauridae	494
		Ornithomimidæ	495
		Hallopidae	497
		Stegosauridae	498
Pterosauri	Orthopoda	Nodosauridae	501
		Ceratopsidae	502
		Campyrosauridae	503
		Iguanodontidae	505
		Trachodontidae	505
	Parasuchia	Nanosauridae	506
		Macelognathidae	507
		Ornithocephalidae	508
		Pteranodontidae	509
		Nyctosauridae	511
Loricata	Aëtosauria	Phytosauridae	511
		Aëtosauridae	511
		Crocodylidae	515
		Gavialidae	516

Class AVES

Subclass.	Superorder.	Order.	Suborder.	Superfamily.	Family.	Page.
Saurura	Odontotormæ	Ornithopappt.			Archæopterygidæ.....	518
		Pteropappt.			Ichthyornithidæ.....	519
	Odontoleæ	Dromæopappt.			Apatornithidæ.....	520
		Gastornithes			Hesperornithidæ.....	521
	Dromæognathæ				Gastornithidæ.....	522
				Colymboidæ.....	Colymbidæ.....	523
				Alcoideæ.....	Alcidæ.....	524
				Laroidæ.....	Laridæ.....	525
				Procellarioidæ.....	Procellariidæ.....	526
				Scolopacoidea.....	Charadriidæ.....	526
Eurhipidura	Euornithes	Grallæ.....			Scolopacidæ.....	526
				Gruoidæ.....	Gruidæ.....	527
				Anatoidea.....	Rallidæ.....	528
		Chenomorpha		Anatoidæ.....	Anatidæ.....	529
				Phenicopteroidæ.....	Phenicopteridæ.....	531
		Herodii.....		Ardeoidæ.....	Ardeidæ.....	531
					Pelecanidæ.....	532
		Steganopodes.....		Pelecanoidea.....	Sulidæ.....	532
					Phalacrocoracidæ.....	533
		Gallina.....			Tetrionidæ.....	534
			Alectoropodes.....		Phasianidæ.....	534
					Gallinuloidæ.....	535
		Raptores.....	Cathartides.....		Cathartidæ.....	535
			Accipitres.....		Falconidæ.....	535
			Striges.....		Strigidæ.....	536
					Corvidæ.....	537
		Passeres.....			Icteridæ.....	537
					Fringillidæ.....	537

Class MAMMALIA.

[illegible]

Class MAMMALIA—Continued.

Subclass.	Superorder.	Order.	Suborder.	Superfamily.	Family.	Page.
Eutheria	Monodelphia	Ungulata	Perissodactyla	Equoidea	Equidæ	608
				Tapiroidea	{ Lophiodontidæ Tapiridæ	624
				Brontotherioidea	Brontotheriidæ	626
				Rhinocerotoidæ	{ Hyracodontidæ Anynodontidæ Rhinocerotidæ	629
						638
						641
				Pantolestoidæ	{ Pantolestidæ Homacodontidæ Helohydæ	642
						648
						649
				Anthracotherioidea	{ Eohydæ Suide Anthracotheriidæ	650
						650
						651
			Artiodactyla	Suoidæ	Suidæ	652
				Cameloidea	{ Agriocheridæ Camelidæ	662
						673
				Traguloidea	Tragulidæ	681
				Bovoidæ	{ Cervidæ Antilocapridæ	681
						686
				Chalicotherioidea	{ Bovidæ Chalicotheriidæ Periplychidæ	686
						690
						693
			Talpigrada	Pantolambidæ		696
				Coryphodontidæ		697
				Bathyopsidæ		700
		Ancylopoda	Pantodonta	Tinoceridæ		701
				Elephantidæ		707
				Esthonychidæ		715
		Proboscidea	Dinocerea	Anchippodontidæ		716
		Tillodontia				

[illegible]

CATALOGUE.

Class ELASMOBRANCHII Bonaparte.

- Bonaparte, C. L.* 1832-1841, Icon. Fauna Ital., iii, Introd.
- Agassiz, L. 1843 B, i, p. 170; iii, p. 73. ("Placoides.")
- 1844 A. ("Placoides.")
- 1845 A. ("Placoides.")
- Balfour, F. M. 1881 A.
- Beard, J. 1890 A.
- Braus, H. 1898 A.
- Bridge, W. J. 1879 A.
- Brühl, B. C. 1847 A.
- 1896 A, p. 533.
- Calori, L. 1894 A.
- Cope, E. D. 1872 C. (Selachii.)
- 1877 O, p. 41.
- 1878 A. "
- 1884 N, p. 579.
- 1885 G.
- 1887 S, pp. 319, 320, 324.
- 1889 R, pp. 853, 854.
- 1890 B.
- 1891 N, pp. 10, 15.
- 1898 B, pp. 17, 21.
- Dean, B. 1895 A.
- 1896 B.
- Dohrn, A. 1886 A.
- Duméril, A. 1865 A.
- Eastman, C. R. 1898 A, p. 108.
- Fritsch, A. 1889 B, p. 95. (Selachii.)
- Gadow, H. 1898 A, p. 5.
- Gadow and Abbott 1895 A.
- Garman, S. 1884 C.
- Gegenbaur, C. 1865 B, pp. 77, 132.
- 1872 A.
- 1876 A.
- 1895 B.
- 1898 A.
- Gill, T. 1861 A, p. 22.
- 1862 A.
- 1884 B.
- 1884 C.
- 1893 A.
- Goepfert, E. 1895 A.
- 1895 B.
- Goette, A. 1878 A.
- Günther, A. 1870 A, p. 348. (Chondropterygii.)
- 1872 A, p. 554. (Chondropterygii.)
- 1880 A, p. 313. (Chondropterygii.)
- 1881 A, p. 685. (Chondropterygii.)
- Haeckel, E. 1895 A, p. 238. (Selachii.)
- Hannover, A. 1868 A.
- Hasse, C. 1876 A.
- 1877 A.
- 1878 A.
- 1879 A.
- 1879 B.
- 1882 A.
- 1893 A.
- Haswell, W. A. 1884 A.
- Hay, O. P. 1899 F, p. 682.
- Hertwig, O. 1874 A.
- Howes, G. B. 1890 A.
- Hubrecht, A. A. W. 1878 A.
- Huxley, T. H. 1872 A, p. 111.
- 1876 A.
- Jackel, O. 1890 A.
- 1890 C.
- 1890 D.
- 1891 B.
- 1891 D. (Selachii.)
- 1894 A.
- Klaatsch, H. 1890 A, p. 103.
- 1896 A.
- Köstlin, O. 1844 A.
- Markert, F. 1896 A, p. 664.
- Marsh, O. C. 1877 E.
- Mayer, P. 1886 A.
- Metschnikoff, O. 1879 A, p. 424.
- Mivart, St. G. 1879 A.
- Mollier, S. 1892 A.
- 1893 A.
- Müller, J. 1846 C, p. 203. (Elasmobranchii, seu Selachii.)
- Müller and Henle 1841 A.
- Newberry, J. S. 1873 A.
- 1875 A.
- Newberry and Worthen 1886 A.
- Nicholson and Lydekker 1889 A, p. 923.
- Osborn, H. F. 1899 I, p. 158.
- Owen, R. 1847 B.
- 1860 E, p. 99.
- 1866 A. (Plagiostomi.)
- Parker, W. K. 1878 A.
- Pictet, F. J. 1854 A, p. 225. ("Placoides.")
- Pollard, H. B. 1894 B.
- Reis, O. M. 1896 A, p. 202.
- Röse, C. 1892 A.
- 1897 A, p. 62.
- Ryder, J. A. 1885 B.
- 1886 A.
- 1892 A.
- St. John and Worthen 1875 A.
- 1883 A.
- Stannius, H. 1854 A.
- Steinmann and Döderlein 1890 A, p. 529.
- Thacher, J. K. 1877 A, p. 284.
- 1877 B.
- Van Beneden, P. J. 1861 B.
- Wiedersheim, R. 1889 A, p. 428.
- Woodward, A. S. 1884 A.
- 1885 B.
- 1886 E.
- 1889 D.
- 1891 A, p. xi.
- 1891 C.
- 1895 B.
- 1898 B, p. 17.
- Worthen, A. H. 1857 A.
- Wortman, J. L. 1886 A, p. 370.
- Zittel, K. A. 1890 A, p. 60. (Selachii.)

Subclass PLAGIOSTOMATA Müller.

Müller, J. 1835 A.

Gill, T. 1861 A., p. 23. (Plagiostomi.)

Günther, A. 1870 A, p. 353.

1871 A, p. 428.

1880 A, p. 313.

Howes, G. B. 1887 A. (Plagiostomi.)

Huxley, T. H. 1872 A, p. 120. (Plagiostomi.)

Müller, J. 1846 C, p. 203. (Plagiostomi.)

Owen, R. 1845 B, p. 23. (Plagiostomi.)

Stannius, H. 1854 A. (Plagiostomi.)

Zittel, K. A. 1890 A, p. 64. (Plagiostomi.)

*Superorder ICHTHYOTOMI Cope.**Cope, E. D.* 1884 U.

Brongniart, C. 1888 A. (Pterygacanthidæ, as subclass.)

1888 B, p. 180. (Pterygacanthidæ.)

1888 C, p. 36. (Pterygacanthidæ.)

Cope, E. D. 1884 B.

1884 N, p. 581.

1884 N, p. 589. (Xenacanthini.)

1884 HH.

1885 G. 1887 S, p. 325.

1889 H.

1889 R, p. 854.

1891 N, p. 15.

1892 N, p. 280.

1893 L.

1893 N, p. 1080.

1894 F, p. 430.

1898 B, pp. 22, 23.

Davis, J. W. 1892 A, p. 704.

Fritsch, A. 1889 B, p. 96. (Xenacanthides.)

1891 B. (Ichthyotomi.)

1895 A, p. 33.

Gadow, H. 1898 A, p. 5. (Proselachii.)

Garman, S. 1884 C.

1885 B, p. 29.

Gill, T. 1884 A. (Xenacanthini.)

1884 B. (Xenacanthini.)

1884 C.

Haeckel, E. 1895 A, p. 240. (Proselachii.)

Kehner, F. A. 1876 A, p. 348. ("Proselachier.")

Koken, E. 1889 A, p. 87.

Nicholson and Lydekker, R. 1889 A, p. 926.

Steinmann and Döderlein, 1890 A, p. 541. (Proselachii.)

Woodward, A. S. 1889 D, p. 1.

1898 B, pp. 17, 32.

Order PLEURACANTHIDES Haeckel.

Haeckel, E. 1895 A, p. 236.

PLEURACANTHIDÆ.

Brongniart, C. 1888 B.

1888 C.

Brown, C. 1900 A, p. 174.

Cope, E. D. 1889 R, p. 854.

1894 F, p. 436.

1898 B, p. 23.

Davis, J. W. 1880 A.

1880 B.

1892 A.

Fritsch, A. 1889 B, p. 96. (Xenacanthidæ.)

1891 B. (Xenacanthidæ.)

1895 A, p. 33. (Xenacanthidæ.)

Geinitz, H. B. 1860 A, p. 468. (Xenacanthi.)

1861 A, p. 22. (Xenacanthi.)

Gegenbaur, C. 1895 B. (Xenacanthini.)

Hasse, C. 1878 A, p. 169.

Jaekel, O. 1890 D, p. 124. (Xenacanthini.)

1894 A, p. 64. (Xenacanthini.)

1895 A. (Pleuracanthidæ.)

Nicholson and Lydekker 1889 A, p. 926.

Reis, O. M. 1897 A.

Steinmann and Döderlein 1890 A, p. 541.

Traquair, R. H. 1900 B, p. 156.

Woodward, A. S. 1885 B, p. 155.

1889 D, p. 1.

1892 E.

1898 B, p. 33.

Zittel, K. A. 1890 A, p. 88. (Xenacanthidæ.)

PLEURACANTHUS Agassiz. Type *P. lævissimus* Agassiz.*Agassiz, L.* 1843 B (1837), iii, p. 66.

1844 A.

Barkas, T. P. 1873 A, p. 17.

Beyrich, E. 1848 A. (Xenacanthus, type *X. decheni*.)

Brongniart, C. 1888 A.

1888 B.

1888 C.

Brown, C. 1900 A, p. 172.

Case, E. C. 1898 B, p. 403.

Cope, E. D. 1884 B.

1884 N, p. 589.

Cope, 1889 H.

1890 B, pl. xiv.

1893 N, pl. xxix.

Davis, J. W. 1880 A. (Pleuracanthus, Xenacanthus.)

1880 B. (Pleuracanthus, Xenacanthus.)

1885 A.

1892 A, p. 705.

Dean, B. 1894 A. (Xenacanthus.)

1895 A, p. 83, figs. 90-90b.

1896 C, p. 246.

Döderlein, L. 1889 A.

- Egerton, P. G. 1857 B. (Pleuracanthus, Xenacanthus.)
 Emery, C. 1897 B.
 Fritsch, A. 1888 A, fig. (Xenacanthus.)
 1889 A. (Xenacanthus.)
 1889 B, p. 99.
 1890 A, fig. (Pleuracanthus, Xenacanthus.)
 1890 B.
 1891 A.
 1891 B. (Xenacanthus.)
 1895 A (1890), p. 3 (Pleuracanthus); p. 21 (Xenacanthus).
 Gegenbaur, C. 1898 A.
 Geinitz, B. 1860 A, p. 468.
 1861 A, p. 22.
 Gill, T. 1884 A. (Xenacanthus.)
 1884 C. (Xenacanthus.)
 Haeckel, E. 1895 A, p. 241.
 Hasse, C. 1879 A, p. 65.
 Jaekel, O. 1890 D, p. 125. (Xenacanthus.)
 1891 C, p. 168. (Xenacanthus.)
 1894 A, p. 103. (Orthacanthus.)
 1895 A. (Pleuracanthus, Xenacanthus.)
 1899 A, p. 295.
 Kner, R. 1867 A. (Pleuracanthus, Xenacanthus.)
 1868 A, p. 279. (Xenacanthus.)
 Koken, E. 1889 A.
 Lütken, C. 1868 A. (Xenacanthus.)
 Miller, S. A. 1889 A, p. 607.
 Mollier, S. 1893 A, p. 114.
 Nicholson and Lydekker, 1889 A, p. 926.
 Owen, R. 1860 E, p. 103.
 Pictet, F. J. 1854 A, p. 273 (Xenacanthus); p. 294 (Pleuracanthus).
 Quenstedt, F. A. 1885 A, p. 289.
 Reis, O. M. 1896 A.
 1897 A.
 Roemer, F. 1857 A, p. 60.
 Steinmann and Döderlein 1890 A, p. 541.

- Ward, J. 1890 A, p. 134.
 Woodward, A. S. 1888 C.
 1889 D, pp. xix, 2.
 1889 F, p. 300.
 1891 B, p. 377, figs. 1, 2.
 1892 E, figs. 2, 3, 7.
 1893 B.
 1896 A, p. 138.
 1898 B, p. 33.

Zittel, K. A. 1890 A, p. 89.

Pleuracanthus arcuatus Newb.

- Newberry, J. S. 1856 B, p. 100.
 Lesley, J. P. 1889 A, p. 506, figure (Orthacanthus); p. 700 (Pleuracanthus).
 1895 A, pl. dlxxi. (Orthacanthus.)
 Newberry, J. S. 1873 A, p. 332, pl. xl, fig. 4. (Orthacanthus.)
 Nicholson and Lydekker, 1889 A, p. 939.
 Woodward, A. S. 1889 D, p. 8.
 Coal-measures; Ohio.

Pleuracanthus biserialis Newb.

- Newberry, J. S. 1856 B, p. 100.
 Woodward, A. S. 1889 D, p. 9.
 Coal-measures; Ohio.

Pleuracanthus dilatatus Newb.

- Newberry, J. S. 1856 B, p. 100.
 Woodward, A. S. 1889 D, p. 9.
 Coal-measures; Ohio.

Pleuracanthus quadriseriatus (Cope).

- Cope, E. D. 1877 E, p. 192. (Orthacanthus.)
 Case, E. C. 1900 A, p. 700, pl. i, figs. 3a, 3b. [P. (Orthacanthus).]
 Cope, E. D. 1881 K, p. 163. (Orthacanthus.)
 Woodward, A. S. 1889 D, p. 9.
 Permian; Illinois.

ORTHACANTHUS Agassiz. Type *O. cylindricus* Agassiz.

- Agassiz, L. 1843 B, iii, pl. xlv, figs. 7-9.
 Beyrich, E. 1848 A, p. 28.
 Brongniart, C. 1888 B, p. 180. (Syn. of Pleuracanthus.)
 Cope, E. D. 1893 N, p. 1080.
 Davis, J. W. 1880 A, p. 349.
 1880 B, p. 321.
 1892 A, p. 705. (Syn. of Pleuracanthus.)
 Fritsch, A. 1889 B, p. 99.
 1890 B.
 1891 A.
 1891 B.
 1895 A (1890), p. 33.
 Goldfuss, A. 1849 A.
 Jaekel, O. 1891 C, p. 167.
 1894 A, p. 103.
 1895 A, p. 83.
 Kner, R. 1867 A.
 Koken, E. 1889 A.
 Lütken, C. 1868 A.
 Miller, S. A. 1889 A, p. 604.
 Newberry, J. S. 1889 A, p. 214.

- Nicholson and Lydekker 1889 A, p. 926. (Syn. of Pleuracanthus.)
 Pictet, F. J. 1854 A, p. 295.
 Reis, O. M. 1897 A.
 Ward, J. 1890 A, p. 137.
 Woodward, A. S. 1889 D, p. 2. (Syn. of Pleuracanthus.)
 1891 B, p. 377.
 1896 A, p. 135.
 Zittel, K. A. 1890 A, p. 90.

Orthacanthus gracilis Newb.

- Newberry, J. S. 1875 A, p. 56, pl. lix, fig. 7.
 Case, E. C. 1900 A, p. 701, pl. i, fig. 4. [Pleuracanthus (Orthacanthus).]
 Cope, E. D. 1881 K, p. 163.
 1888 BB, p. 285.
 Lesley, J. P. 1889 A, p. 506, fig.
 Miller, S. A. 1889 A, p. 604, fig. 1154.
 1895 A, pl. D lxxi.
 Woodward, A. S. 1889 D, p. 9 (Orthacanthus?).
 Permian; Illinois.

Compsacanthus Newb. Type *C. lævis* Newb.

- Newberry, J. S. 1856 B, p. 100.
 Davis, J. W. 1880 A, p. 355.
 1883 A, p. 354.
 1892 A, p. 705. (Syn. of *Pleuracanthus*.)
 Miller, S. A. 1889 A, p. 592.
 Newberry, J. S. 1873 A, p. 331.
 Woodward, A. S. 1889 D, p. 9. (Syn. of *Pleuracanthus*.)
 Zittel, K. A. 1890 A, p. 117.

DIACRANODUS Garman. Type *Didymodus? compressus* Cope, = *D. texensis* Cope; not *Diplodus compressus* of Newberry.

- Garman, S. 1885 B, p. 30.
 Cope, E. D. 1883 K, p. 108 (*Didymodus* in part, to replace *Diplodus*, preoccupied by Rafinesque).
 1884 A. (*Didymodus*.)
 1884 B. (*Didymodus*.)
 1884 N. (*Didymodus*.)
 1884 U. (*Didymodus*.)
 1884 CC. (*Didymodus*.)
 1885 P. (*Didymodus*.)
 1894 F, p. 436. (*Didymodus*.)
 Davis, J. W. 1885 A. (*Didymodus*.)
 1892 A, p. 709. (Syn. of *Pleuracanthus*.)
 Fritsch, A. 1895 A (1890), p. 46. (*Orthacanthus*.)
 Garman, S. 1884 B. (*Diplodus*.)
 1885 A. (*Diplodus*.)
 Gill, T. 1884 A. (*Didymodus*.)
 Goldfuss, A. 1847 A, p. 23, pl. v, figs. 9-11. (*Orthacanthus*.)
 Jaekel, O. 1894 A, p. 103. (*Didymodus*.)
 Koken, E. 1889 A, pp. 87 (*Pleuracanthus*); p. 91 (*Triacranodus*.)
 Woodward, A. S. 1889 D, p. 15 (*Diacranodus*.)
 1890 A, p. 394. (*Didymodus*.)
 1898 B, p. 32. (*Didymodus*.)

DITTODUS Owen. Type, none assigned; *D. divergens* Owen = *Diplodus gibbosus* Agassiz may be taken.

- Owen, R. 1867 B, p. 325, pl. i.
 Unless otherwise indicated, the following writers designate this genus by the name *Diplodus*. This name is, however, preoccupied.
 Agassiz, L. 1843 B, iii, p. 204. (*Diplodus*, type *D. gibbosus*. Name preoccupied by Rafinesque, 1810.)
 1844 A.
 Barkas, T. P. 1868 B.
 1874 A, pp. 344, 346.
 Cope, E. D. 1883 K, p. 108. (*Didymodus* in part.)
 1884 A.
 1884 B.
 1884 N.
 Davis, J. W. 1880 A, p. 349.
 1880 B, p. 321.
 1885 A. (Syn. of *Pleuracanthus*.)
 1892 A, p. 705. (Syn. of *Pleuracanthus*.)
 Destinez, P. 1898 A, p. 219.
 Eastman, C. R. 1899 C, p. 483.
 Egerton, P. G. 1857 B.
 Garman, S. 1884 B.

Compsacanthus lævis Newb.

- Newberry, J. S. 1856 B, p. 100.
 Miller, S. A. 1889 A, p. 592, fig. 1114.
 Newberry, J. S. 1873 A, p. 332, pl. xl, figs. 5, 5a.
 1889 A, p. 204.
 Woodward, A. S. 1889 D, p. 9. (*Pleuracanthus*.)
 Coal-measures; Ohio.

Zittel, K. A. 1890 A, p. 90. (*Didymodus*.)

Diacranodus platypternus (Cope).

- Cope, E. D. 1884 N, p. 587, figs. 8, 9. (*Didymodus*.)
 1884 CC, p. 818, pl. xxiii. (*Didymodus*.)
 1888 BB, p. 285. (*Didymodus*.)
 Garman, S. 1885 B, p. 30. (*Diacranodus*.)
 Permian; Texas.

Diacranodus texensis (Cope).

- Cope, E. D. 1883 K, p. 108. (*Didymodus? compressus* Newb.)
 Case, E. C. 1900 A, p. 701, pl. i, figs. 5a-5d. [*Pleuracanthus* (*Didymodus*).]
 Cope, E. D. 1884 N, pp. 573, 575. (*Diplodus compressus* Cope, not of Newberry.)
 1884 CC, p. 818, pl. xxiii. (*Didymodus compressus*.)
 1885 D, p. 406. (*Pleuracanthus compressus*.)
 1888 BB, p. 285. (*Didymodus*.)
 Garman, S. 1885 B, p. 30. (*Diacranodus compressus*.)
 Woodward, A. S. 1889 D, p. 15. (*Didymodus*.)
 Permian; Texas, Illinois.

- Gill, T. 1884 A.
 Hasse, C. 1879 A, p. 67.
 Hay, O. P. 1899 E, p. 791. (*Dittodus*.)
 Jaekel, O. 1885 A, p. 78.
 Kner, R. 1867 A.
 Koken, E. 1889 A.
 Miller, S. A. 1889 A, p. 596.
 1892 A, p. 714. (*Dissodus*, type *D. gibbosus*.)
 Newberry, J. S. 1873 A, pp. 285, 333, 334.
 1875 A, p. 44.
 Owen, R. 1867 B, p. 325 (*Dittodus*); p. 359 (*Aganodus*); p. 346 (*Ochlodus*); p. 363 (*Pternodus*).
 Pictet, F. J. 1854 A, p. 259.
 Stock, T. 1882 B.
 Thompson, J. 1871 A. (*Dittodus*.)
 Ward, J. 1890 A, p. 138.
 Woodward, A. S. 1885 B, p. 155.
 1889 D, pp. 2, 12. (*Pleuracanthus*, *Diplodus*.)
 1889 F, p. 299.
 1898 B, p. 33. (*Diplodus*.)
 Woodward and Sherborn 1890 A, p. 66.
 Zittel, K. A. 1890 A, p. 90.

Dittodus acinaces (Dawson).

- Dawson, J. W.*, 1860 B, suppl. p. 46, fig. 43. (Diplodus.)
 1863 D, p. 11. (Diplodus.)
 1868 A, p. 211, fig. 58. (Diplodus.)
 1878 A, p. 211, fig. 58. (Diplodus.)
 1894 A, p. 269. (Diplodus.)
Miller, S. A. 1892 A, p. 714. (Dissodus.)
Woodward, A. S. 1889 D, p. 13. (Diplodus.)
 Coal-measures; Nova Scotia.

Dittodus compressus (Newb.).

- Newberry, J. S.*, 1856 A, p. 99. (Diplodus.)
Cope, E. D. 1877 N, p. 53. (Diplodus.)
 1881 K, p. 163. (Diplodus.)
Hay, O. P. 1900 A, p. 16.
Kindle, E. M. 1898 A, p. 484.
Miller, S. A. 1892 A, p. 714. (Dissodus.)
Newberry, J. S. 1873 A, pp. 334, 335. (Diplodus.)
 1875 A, p. 44, pl. lviii, fig. 2. (Diplodus.)
 1889 A, p. 214. (Diplodus.)
Newberry and Worthen 1866 A, p. 60, pl. iv, fig. 2. (Diplodus.)
St. John, O. 1872 A, p. 240, pl. iv, figs. 19a, 19b. (Diplodus.)
St. John and Worthen 1870 A, p. 432. (Diplodus.)
Woodward, A. S. 1889 D, p. 12. (Diplodus.)
 Coal-measures; Indiana, Ohio.

Dittodus gibbosus (Binney).

- Binney, E. W.*, 1841, Trans. Manchester Geol. Soc., i, p. 169, pl. v, figs. 17-18. (Diplodus.)
Agassiz, L. 1843 B, iii, p. 204, pl. 226, fig. 1. (Diplodus gibbosus; not figs. 2-5, *vide* Woodward); p. 205, pl. 226, figs. 6-8. (Diplodus minutus.)
Cope, E. D. 1884 N, p. 573. (Diplodus.)¹
Davis, J. W. 1892 A, p. 725. (Pleuracanthus lævissimus.)
Hancock and Atthey 1868 A, p. 370. (Diplodus.)
Miller, S. A. 1892 A, p. 714. (Dissodus.)
Owen, R. 1867 B, p. 325, pl. i. (Dittodus parallelus.)²
Woodward, A. S. 1889 D, p. 10. (Diplodus.)
 Coal-measures; England; Permian; Texas.

Dittodus gracilis (Newb.).

- Newberry, J. S.*, 1856 B, p. 99. (Diplodus.)

- Miller, S. A.* 1892 A, p. 714. (Dissodus.)
Newberry, J. S. 1873 A, pp. 334, 336. (Diplodus.)
 1875 A, p. 44, pl. lviii, figs. 3, 3a. (Diplodus.)
 1889 A, p. 214. (Diplodus.)
Woodward, A. S. 1889 D, p. 13. (Diplodus.)
 Coal-measures; Ohio.

Dittodus latus (Newb.).

- Newberry, J. S.*, 1856 B, p. 99. (Diplodus.)
Destinez, P. 1898 A, p. 220.
Hay, O. P. 1900 A, p. 96.
Kindle, E. M. 1898 A, p. 484.
Miller, S. A. 1892 A, p. 714. (Dissodus.)
Newberry, J. S. 1873 A, pp. 334, 336. (Diplodus.)
 1875 A, p. 44, pl. lviii, figs. 1-1b. (Diplodus.)
Newberry and Worthen 1866 A, p. 59, pl. iv, figs. 1-1e. (Diplodus.)
Woodward, A. S. 1889 D, p. 12. (Diplodus.)
 Coal-measures; Indiana, Ohio, Illinois, Belgium.

Dittodus lucasi Hay.

- Hay, O. P.*, 1900 A, p. 97, fig. 1.
 Coal-measures; Illinois.

Dittodus penetrans (Dawson).

- Dawson, J. W.*, 1860 B, suppl., p. 50, fig. 42. (Diplodus.)
 1868 A, p. 211, fig. 57. (Diplodus.)
 1878 A, p. 211, fig. 57. (Diplodus.)
Miller, S. A. 1892 A, p. 714. (Dissodus.)
Woodward, A. S. 1889 D, p. 14. (Diplodus.)
 Coal-measures; Nova Scotia.

Dittodus priscus (Eastman).

- Eastman, C. R.*, 1899 C, p. 490, pl. vii, figs. 1, 2. (Diplodus.)
Weller, S. 1899 A. (Diplodus.)
 Devonian; Illinois.

Dittodus striatus (Eastman).

- Eastman, C. R.*, 1899 C, p. 490, pl. vii, figs. 3, 4. (Diplodus.)
Weller, S. 1899 A. (Diplodus.)
 Devonian; Illinois.

PROTODUS A. S. Woodward. Type *P. jexi* A. S. Woodward.

- Woodward, A. S.*, 1892 A, p. 1.
Eastman, C. R. 1899 C, p. 489.
Miller, S. A. 1892 A, p. 717.
Traquair, R. H. 1893 A, p. 145.
 1893 D, p. 111.

Protodus jexi (A. S. Woodward).

- Woodward, A. S.*, 1892 A, p. 2, pl. 1, fig. 1.
Traquair, R. H. 1893 A, p. 145.
 Lower Devonian; New Brunswick.

THRINACODUS St. J. and Worth. Type *T. nanus* St. J. and Worthen.

- St. John and Worthen*, 1875 A, p. 289.
Cope, E. D. 1884 B. (Thrinacodus.)
 1884 N. (Pleuracanthus.)
Davis, J. W. 1892 A, p. 705. (Syn. of Pleuracanthus.)

- Gill, T.* 1884 A.
Koken, E. 1889 A, p. 87. (Pleuracanthus.)
Miller, S. A. 1889 A, p. 613.
Zittel, K. A. 1890 A, p. 90. (Syn. of Diplodus.)
 Probably not distinct from *Dittodus*.

¹ Cope's Texan specimens may belong to some other species.

² See, however, Woodward, A. S. 1891 A, p. 354.

Thrinacodus bicornis Newb.*Newberry, J. S.*, 1879 A, p. 344.

Kindle, E. M. 1898 A, p. 485.

Woodward, A. S. 1889 D, p. 14. (Diplodus.)

Subcarboniferous (St. Louis); Indiana.

Thrinacodus duplicatus (Newb. and Worth.).*Newberry and Worthen*, 1866 A, p. 61, pl. iv, figs. 3, 3a. (Diplodus.)

Destinez, P. 1898 A, p. 220. (Diplodus.)

Keyes, C. R. 1891 A, p. 264. (Thrinacodus duplicatus?)

Lesley, J. P. 1890 A, p. 1186, figures.

1895 A, pl. dlxxii.

St. John and Worthen 1875 A, p. 289. (Thrinacodus.)

Woodward A. S. 1889 D, p. 14. (Diplodus.)

Subcarboniferous (Keokuk); Illinois, Belgium.

Thrinacodus incurvus (Newb. and Worth.).*Newberry and Worthen*, 1866 A, p. 62, pl. iv, figs. 4, 4a. (Diplodus.)

Lesley, J. P. 1890 A, p. 1186.

St. John and Worthen 1875 A, p. 289.

Woodward, A. S. 1889 D, p. 14. (Diplodus.)

Subcarboniferous (Keokuk); Illinois.

Thrinacodus nanus St. J. and Worth.*St. John and Worthen*, 1875 A, p. 289, pl. v, figs. 1, 2.

Woodward A. S. 1889 D, p. 14. (Diplodus.)

Subcarboniferous (Kinderhook); Iowa.

Doliodus Traquair. Type *Diplodus problematicus* A. S. Woodward.*Traquair, R. H.*, 1893 A, p. 145.

Eastman, C. R. 1899 C, p. 489.

Traquair, R. H. 1893 D, p. 112.

Doliodus problematicus (A. S. Woodward).*Woodward, A. S.* 1892 A, p. 2, pl. i, fig. 2. (Diplodus.)

Miller, S. A. 1892 A, p. 714. (Dissodus.)

Traquair, R. H. 1893 A, p. 145.

1893 D, p. 112.

Lower Devonian; New Brunswick.

CLADODONTIDÆ.

Brown, C. 1900 A, p. 174.

Claypole, 1898 B.

1895 C.

1895 D.

Cope, E. D. 1893 L.

1894 F, p. 427.

1898 B, p. 23.

Garman, S. 1885 A ("Cladodonts").

1885 B. ("Cladodonts.")

Gill, T. 1884 B, p. 346. (Hybodontidæ, in part.)

Nicholson and Lydekker 1889 A, p. 927.

Woodward, A. S. 1889 D, p. 16.

Cladodus Agassiz. Type *C. mirabilis* Agassiz.*Agassiz, L.* 1843 B, iii, p. 196.

1844 A.

Barkas, W. J. 1873 A, p. 19.

1874 A, pp. 386, 392, 438.

Brown, C. 1900 A, p. 172.

Claypole, E. W. 1893 B.

1893 D.

1895 C.

1895 H.

Cope, E. D. 1893 L.

1893 O.

1894 F.

Davis, J. W. 1883 A, p. 372.

1885 A.

Dean, B. 1894 A.

Eastman, C. R. 1899 C, p. 489.

1900 B, p. 35.

Emery, C. 1897 B, p. 147.

Gadow, H. 1898 A, p. 5.

Garman, S. 1885 B.

Hasse, C. 1879 A, p. 69.

Jaekel, O. 1892 A.

1899 A, p. 295.

Koken, E. 1889 A, p. 92.

Koninck, L. G. de 1878 A, p. 26.

Kükenthal, W. 1892 A.

Lesley, J. P. 1889 A, p. 130.

McCoy, F. 1855 A, p. 619.

Miller, S. A. 1889 A, p. 590.

Newberry and Worthen 1866 A, p. 20.

Nicholson and Lydekker 1889 A, p. 927.

Pictet, F. J. 1854 A, p. 258.

Reis, O. 1896 A, p. 212.

St. John and Worthen 1875 A, p. 432.

Steinmann and Döderlein 1890 A, p. 546.

Thompson, J. 1870 A.

1871 A.

Traquair, R. H. 1888 A, p. 81.

1900 B, p. 517.

Trautschold, H. 1874 B, p. 286.

Woodward, A. S. 1884 A, p. 267.

1889 D, p. 16.

Woodward and Sherborn 1890 A, p. 34.

Zittel, K. A. 1890 A, p. 67.

Cladodus acuminatus Newb.*Newberry, J. S.* 1856 B, p. 99.

Miller, S. A. 1889 A, p. 590, fig. 1110.

Newberry, J. S. 1875 A, p. 45, pl. lviii, fig. 4.

Woodward, A. S. 1889 D, p. 23.

Coal-measures; Ohio.

Cladodus alternatus St. J. and Worth.

St. John and Worthen 1875 A, p. 265, pl. ii, figs. 14-18.

Koninck, L. G. de 1878 A, p. 29.

Woodward, A. S. 1889 D, pp. 22, 23.

Subcarboniferous (Kinderhook, Burlington); Iowa.

Cladodus angulatus Newb. and Worth.

Newberry and Worthen 1866 A, p. 24, pl. i, figs. 7-8a.

Woodward, A. S. 1889 D, p. 21. (Syn. of *C. robustus*.)

Subcarboniferous (Keokuk); Illinois.

Cladodus bellifer St. J. and Worth.

St. John and Worthen 1875 A, p. 270, pl. iv, fig. 10.

Koninck, L. G. de 1878 A, p. 27, pl. iii, fig. 4.

Sauvage, H. E. 1888 A, p. 47.

Woodward, A. S. 1889 D, p. 23.

Subcarboniferous (Burlington); Iowa.

Cladodus carinatus St. J. and Worth.

St. John and Worthen 1875 A, p. 279, pl. iv, figs. 6, 7.

Woodward, A. S. 1889 D, p. 23.

Coal-measures; Illinois, Iowa.

Cladodus claypolei Hay.

Hay, O. P. 1899 E, p. 783.

Claypole, 1894 A, p. 137, pl. v. (*C. magnificus*, not of Tuomey, 1858.)

Devonian (Cleveland shale); Ohio.

Cladodus concinnus Newb.

Newberry, J. S. 1875 A, p. 48, pl. lviii, fig. 8.

1889 A, p. 170, pl. xxi.

Woodward, A. S. 1889 D, p. 23.

Devonian (Cleveland shale); Ohio.

Cladodus coniger Hay.

Hay, O. P. 1899 E, p. 783.

Miller, S. A. 1892 A, p. 714. (*C. carinatus*.)

Newberry, J. S. 1889 A, p. 103. (*C. carinatus*, not of St. John and Worthen.)

Devonian (Chemung); Pennsylvania.

Cladodus costatus Newb. and Worth.

Newberry and Worthen 1866 A, p. 27, pl. i, figs. 13, 13a.

Woodward, A. S. 1889 D, p. 23.

Subcarboniferous (Chester); Illinois.

Cladodus deflexus Newb. and Worth.

Newberry and Worthen 1870 A, p. 355, pl. iii, figs. 3, 3a.

Woodward, A. S. 1889 D, p. 23.

Subcarboniferous (Burlington); Illinois.

Cladodus eccentricus St. J. and Worth.

St. John and Worthen 1875 A, p. 272, pl. iv, fig. 4.

Keyes, C. R. 1894 A, p. 229.

Woodward, A. S. 1889 D, p. 23.

Subcarboniferous (St. Louis); Illinois, Missouri.

Cladodus elegans Newb. and Worth.

Newberry and Worthen 1870 A, p. 354, pl. iv, fig. 9.

Keyes, C. R. 1894 A, p. 229.

Woodward, A. S. 1889 D, p. 23.

Subcarboniferous (St. Louis); Missouri.

Cladodus euglypheus St. J. and Worth.

St. John and Worthen 1875 A, p. 274, pl. iv, figs. 1-3.

Keyes, C. R. 1894 A, p. 229.

Woodward, A. S. 1889 D, p. 24.

Subcarboniferous (St. Louis); Illinois, Missouri, Iowa.

Cladodus exiguus St. J. and Worth.

St. John and Worthen 1875 A, p. 261, pl. iii, figs. 13-15.

Woodward, A. S. 1889 D, p. 24.

Subcarboniferous (Kinderhook); Iowa.

Cladodus exilis St. J. and Worth.

St. John and Worthen 1875 A, p. 258, pl. i figs. 1-6.

Woodward, A. S. 1889 D, p. 24.

Subcarboniferous (Kinderhook); Iowa.

Cladodus ferox Newb. and Worth.

Newberry and Worthen 1866 A, p. 26, pl. i, fig. 11.

Hambach, G. 1890 A, p. 80.

Woodward, A. S. 1889 D, p. 24.

Subcarboniferous (St. Louis); Missouri.

Cladodus fulleri St. J. and Worth.

St. John and Worthen 1875 A, p. 276, pl. iv, fig. 9.

Woodward, A. S. 1889 D, p. 24.

Coal-measures; Illinois, Iowa.

Cladodus girtyi Hay.

Hay, O. P. 1900 A, p. 98, fig. 2.

Coal-measures; Colorado.

Cladodus gomphoides St. J. and Worth.

St. John and Worthen 1875 A, p. 269, pl. iv, figs. 12-16.

Woodward, A. S. 1889 D, p. 24.

Subcarboniferous (Burlington); Iowa.

Cladodus gracilis Newb. and Worth.

Newberry and Worthen 1866 A, p. 30, pl. i, fig. 17.

Kindle, E. M. 1898 A, p. 484.

Trauttschold, H. 1874 B, p. 287.

Woodward, A. S. 1889 D, p. 24.

Coal-measures; Indiana.

Cladodus grandis Newb. and Worth.

Newberry and Worthen 1866 A, p. 29, pl. i, figs. 15, 15a.

Woodward, A. S. 1889 D, p. 21.

Subcarboniferous (Chester); Illinois.

Cladodus hertzeri Newb.

Newberry, J. S. 1875 A, p. 46, pl. lviii, fig. 5.

Woodward, A. S. 1889 D, p. 24.

Subcarboniferous (below Berea Grit); Ohio.

Cladodus intercostatus St. J. and Worth.

St. John and Worthen 1875 A, p. 267, pl. iv, fig. 11.
Woodward, A. S. 1889 D, p. 24.

Subcarboniferous (Burlington); Iowa, Illinois.

Cladodus ischypus Newb. and Worth.

Newberry and Worthen 1870 A, p. 354, pl. iv, figs. 6, 6a.

Woodward, A. S. 1889 D, p. 24.

Subcarboniferous (St. Louis); Missouri.

Cladodus keokuk St. J. and Worth.

St. John and Worthen 1875 A, p. 268.

Woodward, A. S. 1889 D, p. 24.

Subcarboniferous (Keokuk); Iowa, Illinois.

Cladodus lamnoides Newb. and Worth.

Newberry and Worthen 1866 A, p. 30, pl. i, fig. 16.

Trautschold, H. 1874 B, p. 286, text figure and pl. xxviii, fig. 3; pl. xxix, fig. 2.

Woodward, A. S. 1889 D, pp. 22, 24.

Subcarboniferous (Keokuk); Illinois. Also reported from Russia.

Cladodus magnificus Tuomey.

Tuomey, M. 1858 A, p. 39, figs. C, Cb.

Newberry, J. S. 1889 A, p. 216.

Newberry and Worthen 1866 A, p. 24, pl. i, figs. 6, 6a.

Subcarboniferous; Alabama, Illinois, Iowa.

Cladodus micropus Newb. and Worth.

Newberry and Worthen 1866 A, p. 21, pl. i, figs. 2, 2b.

Woodward, A. S. 1889 D, p. 21. (Syn. of *C. robustus*.)

Subcarboniferous (Keokuk); Illinois.

Cladodus monroei Eastman.

Eastman, C. R. 1900 B, p. 36, fig. 2.

Devonian (Hamilton); Ohio.

Cladodus mortifer Newb. and Worth.

Newberry and Worthen 1866 A, p. 22, pl. i, fig. 5.

Newberry, J. S. 1897 A, p. 285, pl. xxii, figs 2, 2a.

St. John, O. 1870 A, p. 431.

1872 A, p. 239, pl. iii, figs. 6a-b; pl. vi, figs. 13a-13d.

Woodward, A. S. 1889 D, p. 24. (Syn. of *C. occidentalis*.)

Coal-measures; Illinois, Indiana, Iowa, Nebraska, Kansas.

Cladodus newmani Tuomey.

Tuomey, M. 1858 A, p. 39, fig. B.

Newberry, J. S. 1889 A, p. 216.

Subcarboniferous; Alabama.

Cladodus occidentalis Leidy.

Leidy, J. 1859 C, p. 3.

1873 B, pp. 311, 352, pl. xvii, figs. 4-6.

Woodward, A. S. 1889 D, p. 24.

Coal-measures; Kansas.

Cladodus pandatus St. J. and Worth.

St. John and Worthen 1875 A, p. 278, pl. iv, fig. 8.

Woodward, A. S. 1889 D, p. 25.

Coal-measures; Illinois.

Cladodus parvulus Newb.

Newberry, J. S. 1875 A, p. 48, pl. lviii, figs. 9, 9a.

Woodward, A. S. 1889 D, p. 25.

Devonian; Ohio.

Cladodus pattersoni Newb.

Newberry, J. S. 1875 A, p. 47, pl. lviii, figs. 6, 6a.
 1889 A, p. 171.

Woodward, A. S. 1889 D, p. 25.

Subcarboniferous (Waverly); Ohio, Kentucky.

Cladodus politus Newb. and Worth.

Newberry and Worthen 1866 A, p. 27, pl. i, fig. 12.

Woodward, A. S. 1889 D, p. 25.

Subcarboniferous (Chester); Illinois.

Cladodus prænuntius St. J. and Worth.

St. John and Worthen 1875 A, p. 270, pl. iv, fig. 17.

Woodward, A. S. 1889 D, p. 25.

Subcarboniferous (Burlington); Iowa.

Cladodus raricostatus St. J. and Worth.

St. John and Worthen 1875 A, p. 271, pl. iv, fig. 18.

Woodward, A. S. 1889 D, p. 25.

Subcarboniferous (Keokuk); Iowa.

Cladodus rivi-petrosi Claypole.

Claypole, E. W. 1893 B, p. 328, pl. viii.

1893 D, p. 445, fig. 1.

Devonian (Cleveland shale); Ohio.

Cladodus robustus Newb. and Worth.

Newberry and Worthen 1866 A, p. 20, pl. i, figs. 1, 1a.

Woodward, A. S. 1889 D, pp. 21, 25. (*C. robustus*, *micropus*, *angulatus*, *turritus*.)

Subcarboniferous (Keokuk); Illinois.

Cladodus romingeri Newb.

Newberry, J. S. 1875 A, p. 49.

1889 A, p. 177, pl. xxvii, fig. 10.

Woodward, A. S. 1889 D, p. 25.

Subcarboniferous (Waverly); Michigan.

Cladodus spinosus Newb. and Worth.

Newberry and Worthen 1866 A, p. 22, pl. i, figs. 3, 3a.

Dana, J. D. 1896 A, p. 644, fig. 1021.

Hambach, G. 1890 A, p. 80.

Woodward, A. S. 1889 D, p. 22.

Subcarboniferous (St. Louis); Missouri.

Cladodus splendens Newb.

Newberry, J. S. 1897 A, p. 284, pl. xxii, fig. 1.

Subcarboniferous (Kinderhook); Iowa.

Cladodus springeri St. J. and Worth.

St. John and Worthen 1875 A, p. 259, pl. ii, figs. 1-13

Destinez, P. 1898 A, p. 222.

Koninck, L. G. de 1878 A, p. 28, pl. iii, figs. 5, 6.

Sauvage, H. E. 1888 A, p. 47.

Woodward, A. S. 1889 D, p. 22.

Subcarboniferous (Kinderhook); Iowa. Also reported from Belgium.

Cladodus stenopus Newb. and Worth.

Newberry and Worthen 1866 A, p. 23, pl. i, figs. 4, 4a.
Woodward, A. S. 1889 D, p. 25.

Subcarboniferous (St. Louis); Illinois.

Cladodus striatus Agassiz.

Agassiz, L. 1843 B, iii, p. 197 pl. xxii b, figs. 14-17.
Davis, J. W. 1883 A, p. 375, pl. xlix, figs. 12, 13 (C. striatus); p. 374, pl. xlix, figs. 10, 11 (C. elongatus); p. 379, pl. xlix, fig. 19 (C. curtus); p. 380, pl. xlix, fig. 20 (C. hornei).

Eastman, C. R. 1900 B, p. 36.

Traquair, R. H. 1888 A. p. 81.

Woodward, A. S. 1889 D, p. 19.

Subcarboniferous; England, Ireland: Devonian (Corniferous); Ohio (if correctly identified).

Cladodus subulatus Newb.

Newberry, J. S. 1875 A, p. 47, pl. lviii, fig. 7.

Woodward, A. S. 1889 D, p. 25.

Devonian (Cleveland shale); Ohio.

Cladodus succinctus St. J. and Worth.

St. John and Worthen 1875 A, p. 265, pl. iii, figs. 8-12.

Koninck, L. G. de 1878 A, p. 29.

Woodward, A. S. 1889 D, pp. 22, 25.

Subcarboniferous (Kinderhook); Iowa.

Cladodus terrelli Newb.

Newberry, J. S. 1889 A, p. 170, pl. xxvii, figs. 5-7.

Dean, B. 1894 A, p. 107. (C. terrelli?).

Devonian (Cleveland shale); Ohio.

Cladodus tumidus Newb.

Newberry, J. S. 1889 A, p. 172, pl. xxvii, figs. 8-9.

Devonian (Cleveland shale); Ohio.

Cladodus turritus Newb. and Worth.

Newberry and Worthen 1866 A, p. 28, pl. i, fig. 14.

Woodward, A. S. 1889 D, p. 21. (Syn. of C. robustus).

Subcarboniferous (Keokuk); Illinois.

Cladodus vanhornei St. J. and Worth.

St. John and Worthen 1875 A, p. 273, pl. iv, fig. 5.

Woodward, A. S. 1889 D, p. 25.

Subcarboniferous (St. Louis); Illinois.

Cladodus wachsmuthi St. J. and Worth.

St. John and Worthen 1875 A, p. 263, pl. iii, figs. 1-7.

Davis, J. W. 1883 A, p. 376.

Koninck, L. G. de 1878 A, p. 29.

Woodward, A. S. 1889 D, pp. 22, 26. (C. wachsmuthi.)

Subcarboniferous (Kinderhook); Iowa.

Cladodus zygopus Newb. and Worth.

Newberry and Worthen 1866 A, p. 25, pl. i, figs. 9, 9a.

Woodward, A. S. 1889 D, p. 26.

Subcarboniferous (Chester); Illinois.

PHÆBODUS St. J. and Worth. Type *P. sophiæ* St. J. and Worth.

St. John and Worthen 1875 A, p. 251.

Eastman, C. R. 1899 C, p. 489.

Garman, S. 1885 B, p. 31 (Pternodus, type *P. springeri*; not of Owen, 1867).

Miller, S. A. 1889 A, p. 588 (Bathychilodus); p. 606 (Phæbodus).

St. John and Worthen 1875 A, p. 252. (Bathychilodus, type *B. macisaacsi* St. J. and Worth.)

Woodward, A. S. 1889 D, p. 27.

Phæbodus macisaacsi (St. J. and Worth.).

St. John and Worthen 1875 A, p. 252, pl. i, figs. 12-13d. (Bathychilodus.)

Miller, S. A. 1889 A, p. 588, fig. 1103. (Bathychilodus).

Woodward, A. S. 1889 D, p. 27.

Middle Devonian; Iowa.

Phæbodus politus Newb.

Newberry, J. S. 1889 A, p. 173, pl. xxvii, figs. 27-28a.

Eastman, C. R. 1899 C, p. 491, pl. vii, fig. 5.

Devonian (Cleveland shale); Ohio, Illinois.

Phæbodus sophiæ St. J. and Worth.

St. John and Worthen 1875 A, p. 251, pl. i, figs. 14-14d.

Lesley, J. P. 1889 A, p. 635, figures.

Miller, S. A. 1889 A, p. 606, fig. 1158.

Newberry, J. S. 1889 A, p. 174.

Woodward, A. S. 1889 D, p. 27.

Middle Devonian, Iowa.

Phæbodus springeri (St. J. and Worth.).

St. John and Worthen 1875 A, p. 255, pl. i, figs. 7-7d. (Pristicladodus.)

Garman, S. 1885 B, p. 31. (Pternodus.)

Lesley, J. P. 1889 A, p. 745, figures. (Pristicladodus springeri, P. armatus.)

Miller, S. A. 1889 A, p. 608, fig. 1162. (Pristicladodus.)

St. John and Worthen 1875 A, p. 256, pl. i, figs. 8-11c. (Pristicladodus springeri, P. armatus.)

Woodward, A. S. 1889 D, p. 27. (Phæbodus.)

Subcarboniferous (Kinderhook); Iowa.

LAMBODUS St. J. and Worth. Type *L. costatus* St. J. and Worth.

St. John and Worthen 1875 A, p. 280.

Miller, S. A. 1889 A, p. 600.

Nicholson and Lydekker 1889 A, p. 928.

Woodward, A. S. 1889 D, p. 27.

Lambdodus calceolus St. J. and Worth.

St. John and Worthen 1875 A, p. 281, pl. v., fig. 5.

Keyes, C. R. 1894 A, p. 230.

St. John and Worthen 1875 A, p. 282, pl. i, figs. 6-6c (var. *robustus*).

Woodward, A. S. 1889 D, p. 27 (L. *calceolus* and L. *robustus*).

Subcarboniferous (Burlington); Iowa, Illinois; (Keokuk); Illinois, Missouri, Iowa.

Lambdodus costatus St. J. and Worth.

St. John and Worthen 1875 A, p. 280, pl. v, fig. 3.

Keyes, C. R. 1894 A, p. 229.

Miller, S. A. 1889 A, p. 600, fig. 1140.

Subcarboniferous (Burlington, Keokuk); Iowa, Illinois, Missouri.

Lambdodus hamulus St. J. and Worth.

St. John and Worthen 1875 A, p. 283, pl. v, figs. 26a-26c. (L. *hamatus*, on explanation of plate.)

CARCHAROPSIS Agassiz. Type *C. prototypus* Agassiz = *Pristicladodus dentatus* McCoy.

Agassiz, L. 1843 B, iii, p. 313. (Definition in footnote.)

Davis, J. W. 1883 A, p. 381; p. 384. (*Pristicladodus*.)

Eichwald, E. 1860 A, p. 1604. (*Dicrenodus*.)

Günther, A. 1880 A, p. 319.

Hasse, C. 1878 A, p. 168. (*Pristicladodus*.)

McCoy, F. 1855 A, p. 642.

Miller, S. A. 1889 A, p. 589 (*Carcharopsis*); p. 608. (*Pristicladodus*).

1892 A, p. 714. (*Dicrenodus*.)

Nicholson and Lydekker 1889 A, p. 944 (*Carcharopsis*); 928 (*Dicrenodus*).

Pictet, F. J. 1854 A, p. 239.

Romanovsky, G. 1853 A, p. 408, pl. viii. (*Dicrenodus*, type *D. okensis*.)

St. John and Worthen 1875 A, p. 253 (*Pristicladodus*); p. 254 (*Carcharopsis*).

Woodward, A. S. 1889 D, p. 27.

Subcarboniferous (Chester); Illinois.

Lambdodus reflexus St. J. and Worth.

St. John and Worthen 1875 A, p. 284, pl. v, figs. 25, 25a.

Woodward, A. S. 1889 D, p. 27.

Subcarboniferous (Chester); Illinois.

Lambdodus transversus St. J. and Worth.

St. John and Worthen 1875 A, p. 282, pl. v, figs. 4a, 4b.

Woodward, A. S. 1889 D, p. 27.

Subcarboniferous (St. Louis); Illinois.

Woodward, A. S. 1886 A, p. 268.

1889 D, p. 28. (*Dicrenodus*.)

Woodward and Sherborn 1890 A, p. 63. (*Dicrenodus*.)

Zittel, K. A. 1890 A, p. 81 (*Carcharopsis*); p. 66 (*Pristicladodus*).

Carcharopsis wortheni Newb.

Newberry and Worthen 1866 A, p. 69, pl. iv, figs. 14 14a.

Dana, J. D. 1896 A, p. 644, fig. 1020.

Davis, J. W. 1883 A, p. 383. (*Pristicladodus*.)

Miller, S. A. 1889 A, p. 589, fig. 1106.

St. John and Worthen 1875 A, p. 255.

Woodward, A. S. 1889 D, p. 29. (*Dicrenodus*.)

Subcarboniferous; Alabama.

HYBOCLADODUS St. J. and Worth. Type *H. plicatilis* St. J. and Worth.

St. John and Worthen 1875 A, p. 284.

Miller, S. A. 1889 A, p. 600.

Nicholson and Lydekker 1889 A, p. 928.

Woodward, A. S. 1889 D, p. 29.

Hybocladodus compressus (Newb. and Worth).

Newberry and Worthen 1866 A, p. 78, pl. v, fig. 1. (*Helodus*.)¹

St. John and Worthen 1875 A, p. 287, pl. v, fig. 8.

Woodward, A. S. 1889 D, p. 29.

Subcarboniferous (Burlington); Iowa.

Hybocladodus intermedius St. J. and Worth.

St. John and Worthen 1875 A, p. 287, pl. v, fig. 11.

Woodward, A. S. 1889 D, p. 29.

Subcarboniferous (Keokuk); Iowa, Illinois.

Hybocladodus nitidus St. J. and Worth.

St. John and Worthen 1875 A, p. 288, pl. v, fig. 7.

Woodward, A. S. 1889 D, p. 29.

Subcarboniferous (Chester); Illinois.

Hybocladodus plicatilis St. J. and Worth.

St. John and Worthen 1875 A, p. 286, pl. v, fig. 9.

Miller, S. A. 1889 A, p. 600.

Woodward, A. S. 1889 D, p. 30.

Subcarboniferous (Burlington); Iowa.

Hybocladodus tenuicostatus St. J. and Worth.

St. John and Worthen 1875 A, p. 286, pl. v, fig. 10.

Woodward, A. S. 1889 D, p. 30.

Subcarboniferous (Keokuk); Illinois, Iowa.

SYMMORIUM Cope. Type *S. reniforme* Cope.

Cope, E. D. 1893 L.

1894 F, p. 427.

Symmorium reniforme Cope.

Cope, E. D. 1893 L.

Brown, C. 1900 A, p. 171, fig. 6c.

Cope, E. D. 1894 F, p. 427, pl. xviii, figs. 1-5.

Coal-measures; Illinois.

¹ Not *H. compressus* Newberry and Worthen 1870 A, p. 360.

MONOCLADODUS Claypole. Type *M. clarki* Claypole.

Claypole, E. W. 1893 B, p. 329.

1893 G, p. 619.

Cope, E. D. 1893 O. (Syn. of *Styptobasis*.)

1894 F, p. 434.

Monocladodus clarki Claypole.

Claypole, E. W. 1893 B, p. 329, pl. viii.

1893 D, p. 447, fig. 2.

Claypole, E. W. 1893 G, p. 619, pl. xl, fig. 2.

Cope, E. D. 1893 O.

Devonian (Cleveland shale); Ohio.

Monocladodus pinnatus Claypole.

Claypole, E. W. 1893 B, p. 330.

Cope, E. D. 1893 O.

Devonian (Cleveland shale); Ohio.

STYPTOBASIS Cope. Type *S. knightiana* Cope.

Cope, E. D. 1891 B, p. 447.

1893 O.

Styptobasis aculeata Cope.

Cope, E. D. 1894 F, p. 434, pl. xx, figs. 1-5.

Coal-measures; Illinois.

Styptobasis knightiana Cope.

Cope, E. D. 1891 B, p. 447, pl. xxviii, fig. 1.

Knight, W. C. 1899 A, p. 374.

Woodward, A. S. 1892 B, p. 233.

Permian; Nebraska.

Order PLEUROPTERYGIA Dean.

Dean, B. 1894 A, p. 110.

Woodward, A. S. 1898 B, p. 29. (Pleuropterygii.)

CLADOSELACHIDÆ.

Dean, B. 1894 A, p. 111.

1895 A.

1896 C.

CLADOSELACHE Dean. Type *Cladodus fylleri* (Newb.).

Dean, B. 1893 C, p. 124.

Brown, C. 1900 A, p. 172.

Case, E. C. 1898 B, p. 402.

Cope, E. D. 1894 F, p. 429.

Dean, B. 1894 A.

1895 A.

1896 B.

1896 C.

Jaekel, O. 1892 A. (Syn. of *Cladodus*.)

Reis, O. M. 1896 A.

Traquair, R. H. 1900 B, p. 516.

Woodward, A. S. 1892 E. (Cladodus.)

1895 B, p. 40.

1898 B, p. 30.

Jaekel, O. 1892 A, p. 91. (Cladodus.)

Mollier, S. 1893 A, p. 118. (Cladodus.)

Woodward, A. S. 1895 B, p. 40.

1898 B, p. 31, fig. 24.

Devonian (Cleveland shale); Ohio.

Cladoselache kepleri (Newb.).

Newberry, J. S. 1888 D, p. 178. (Cladodus.)

Claypole, E. W. 1893 B, p. 327, pl. vii. (Cladodus.)

1893 G, p. 616. (Cladodus.)

Dean, B. 1894 A, p. 103.

1896 B, p. 676, fig. 5.

Jaekel, O. 1892 A, p. 82. (Cladodus.)

Newberry, J. S. 1889 A, pls. xlv, xlv. (Cladodus.)

Woodward, A. S. 1889 D, p. 457. (Cladodus.)

Devonian (Cleveland shale); Ohio.

Cladoselache clarki (Claypole.)

Claypole, E. W. 1893 B, p. 327, pl. vii. (Cladodus.)

Dana, J. D. 1896 A, p. 619, fig. 976. (Cladodus.)

Claypole, E. W. 1895 A, pls. i, ii. (Cladodus.)

Dean, B. 1896 B, p. 677, fig. 7.

Devonian (Cleveland shale); Ohio.

Cladoselache fylleri (Newb.).

Newberry, J. S. 1889 A, pls. xlv, xlix, figs. 2, 3; no description. (Cladodus.)

Claypole, E. W. 1893 B, p. 325. (Cladodus.)

1893 G, p. 616. (Cladodus.)

1895 H, p. 191. (Cladodus.)

Dana, J. D. 1896 A, p. 619, fig. 977.

Dean, B. 1894 A.

1894 B, p. 115, pl. ii, figs. 1, 2.

1895 A, p. 79, fig. 86.

1896 B.

Cladoselache newberryi Dean.

Dean, B. 1894 B, pl. i, figs. 3-8.

Cope, E. D. 1895 B. (Cladodus.)

Dean, B. 1896 B, p. 677, fig. 5.

Woodward, A. S. 1895 B, p. 41, fig. 2.

Subcarboniferous (Waverly); Ohio.

Cladoselache sinuatus (Claypole).

Claypole, E. W. 1893 B, p. 327, pl. vii. (Cladodus.)

1893 G, p. 618, pl. xliii, fig. 6 (Cladodus?

sinuatus); explan. pl. xliii (Cladodus *rotundiceps*).

Dana, J. D. 1896 A, p. 619, fig. 976. (Cladodus.)

Devonian (Cleveland shale); Ohio.

Order ACANTHODII Owen.

Owen, R. 1860 E, p. 130.

Cope, E. D. 1891 N, pp. 15, 18.
1893 L.

1898 B, p. 22.

Fritsch, A. 1895 A (1893), p. 49. ("Tribus Acanthodides.")

Gadow, H. 1898 A, p. 6. (Acanthodi.)

Haeckel, E. 1895 A, pp. 236, 246. (Acanthodini.)

Huxley, T. H. 1861 B, p. 37. (Acanthodidæ.)

Jaekel, O. 1896 B, p. 126.

Woodward, A. S. 1891 A, pp. xi, 1.

1898 B, p. 35.

ACANTHOËSSIDÆ.¹

Agassiz, L. 1844 B, p. 32. ("Acanthodiens.")

1846 A, p. 45. ("Acanthodiens.")

Cope, E. D. 1893 L.

Davis, J. W. 1894 A, p. 249.

Dean, B. 1895 A.

Egerton, P. G. 1866 A.

Fritsch, A. 1895 A (1893), p. 49.

Günther, A. 1881 A, p. 686. (Acanthodini.)

Huxley, T. H. 1861 B, p. 37.

1872 A, p. 129.

Jaekel, O. 1892 A.

Klaatsch, H. 1890 A, p. 149.

Lütken, C. 1873 A, p. 41.

Newberry, J. S. 1873 A, p. 258.

Nicholson and Lydekker 1889 A, p. 966.

Pictet, F. J. 1854 A, p. 188. ("Acanthodiens.")

Powrie, J. 1864 B, p. 417.

Reis, O. M. 1892 A.

1895 B.

1896 A.

1897 A, p. 87.

Rohon, V. 1893 A, p. 20.

Steinmann and Döderlein 1890 A, p. 564.

Traquair, R. H. 1881 A, p. 18.

1891 A, p. 124.

1894 A.

Woodward, A. S. 1891 A, p. 2.

1898 B, p. 39.

Zittel, K. A. 1890 A, p. 165.

ACANTHOËSSUS² Agassiz.

Type *A. browni* Agassiz.

Agassiz, L. 1832, Leonhard and Brown's Zeitschr.
f. Mineral., p. 149.

By the following authors this genus is referred to by the name *Acanthodes*:

Agassiz, L. 1843 B (1834), ii, pt. i, pp. 3, 19.
(*Acanthoëssus* changed to *Acanthodes*.)

1844 A.

1844 B, p. 32.

Beyrich, E. 1848 A, p. 24. (*Holacanthodes*.)

Davis, J. W. 1894 A, p. 249.

Dean, B. 1895 A.

Egerton, P. G. 1861 B.

Fritsch, A. 1895 A (1893), p. 58.

Gadow, H. 1898 A, p. 6.

Jaekel, O. 1899 B, p. 56, figs. 1, 2.

Kner, R. 1868 A, p. 290.

Miller, S. A. 1889 A, p. 586.

Nicholson and Lydekker 1889 A, p. 966.

Pictet, F. J. 1854 A, p. 189.

Quenstedt, F. A. 1852 A, p. 191.

1885 A, p. 302.

Reis, O. M. 1896 A.

Roemer, F. 1857 A, p. 65.

Rohon, V. 1889 A.

1893 A, pp. 20, 55.

Steinmann and Döderlein 1890 A, p. 564.

Traquair, R. H. 1888 B, p. 511. (*Mesacanthus*.)

1893 B, p. 177.

1894 A.

Woodward, A. S. 1891 A, p. 1.

1898 B, p. 39.

Zittel, K. A. 1890 A, p. 166.

***Acanthoëssus affinis* (Whiteaves).**

Whiteaves, J. F. 1887 A, p. 107. (*Acanthodes mitchelli*?, with *A. affinis* as alternative.)

Dana, J. D. 1896 A, p. 620, fig. 978. (*Acanthodes*.)

Traquair, R. H. 1890 A, p. 16. (*Mesacanthus affinis*.)

Whiteaves, J. F. 1883 A, p. 354. (*Acanthodes mitchelli*?)

1883 B, p. 160. (*Acanthodes mitchelli*?)

1889 A, p. 91, pl. v., figs. 1-1f. (*Acanthodes affinis*.)

Woodward, A. S. 1891 A, p. 14. (*Acanthodes affinis*.)

Upper Devonian; Quebec, Canada.

***Acanthoëssus concinnus* (Whiteaves).**

Whiteaves, J. F. 1887 A, p. 107, pl. x, figs. 1, 1a. (*Acanthodes*.)

Traquair, R. H. 1890 A, p. 15. (*Acanthodes*.)

Whiteaves, J. F. 1889 A, pl. v, fig. 2. (*Acanthodes*.)

Woodward, A. S. 1891 A, p. 10. (*Acanthodes*.)

Upper Devonian; Quebec, Canada.

***Acanthoëssus ? pristis* (Clarke).**

Clarke, J. M. 1885 A, p. 42. (*Acanthodes*?)

Woodward, A. S. 1891 A, p. 15. (*Acanthodes*?)

Devonian (Genesee); New York.

***Acanthoëssus semistriatus* (A. S.**

Woodward).

Woodward, A. S. 1892 A, p. 3, pl. 1, fig. 3. (*Acanthodes*.)

Lower Devonian; New Brunswick.

¹ By most authors this family is called *Acanthodidae*. The change is necessitated by adopting the earlier generic name *Acanthoëssus* for *Acanthodes*.

² The law of priority, which lies at the base of all codes of nomenclature, requires the restoration of the name first given by Agassiz to this genus.

CHEIRACANTHUS Agassiz. Type *C. murchisoni* Agassiz.

Agassiz, L. 1843 B (1835), ii, pt. i, p. 125.

1844 B, p. 39.

Gadow, H. 1898 A, p. 6.

McCoy, F. 1855 A, p. 582.

Pictet, F. J. 1854 A, p. 189.

Reis, O. M. 1896 A.

Traquair, R. H. 1893 A.

Woodward, A. S. 1891 A, p. 16.

Woodward and Sherborn, 1890 A, p. 29.

Zittel, K. A. 1890 A, p. 167.

Cheiracanthus costellatus Traquair.

Traquair, R. H. 1884 B, p. 3, pl. ii. (Ctenacanthus.)

Garman, S. 1884 C, p. 484. (Ctenacanthus.)

Traquair, R. H. 1888 A, p. 81. (Ctenacanthus costellatus?)

1893 A, p. 146.

1893 D, p. 112.

Woodward, A. S. 1889 D, p. 242. (Sphenacanthus.)

Subcarboniferous; Scotland: Devonian; Province of Quebec, Canada (if correctly identified).

DIPLACANTHIDÆ.

Cope, E. D. 1891 N, p. 19.

Traquair, R. H. 1894 A.

Woodward, A. S. 1891 A, p. 22.

DIPLACANTHUS Agassiz. Type *D. crassisimus* Duff.

Agassiz, L. 1844 B, pp. 34, 40.

Dean, B. 1894 A, p. 110.

Egerton, P. G. 1861 B.

Gadow, H. 1898 A, p. 6.

McCoy, F. 1855 A, p. 584.

Pictet, F. J. 1854 A, p. 191.

Reis, O. M. 1896 A, p. 167.

Traquair, R. H. 1888 B, p. 512. (Rhadinacanthus, type *R. longispinis*.)

1891 A, p. 125.

1894 A.

Woodward, A. S. 1891 A, p. 23.

Woodward and Sherborn 1890 A, p. 65.

Zittel, K. A. 1890 A, p. 167.

Diplacanthus crassisimus Duff.

Duff, P. 1842, Geol. Moray, p. 71, pl. x, fig. 2. (Diplocanthus.)

Agassiz, L. 1844 B, pp. 34, 41, pl. xiv, figs. 1-5 (*D. striatus*); pp. 34, 42, pl. xiii, figs. 3, 4 (*D. striatulus*); pp. 34, 43, pl. xiii, figs. 1, 2; pl. xiv, figs. 6, 7 (*D. crassispinus*).

McCoy, F. 1848 C, p. 301. (*D. gibbus*.)

1855 A, p. 584, pl. ii B, fig. 4. (*D. gibbus*.)

Traquair, R. H. 1888 B, p. 512. (*D. striatus*.)

Whiteaves, J. F. 1881 A, p. 495. (*D. striatus*?)

1883 A, p. 354. (*D. ?*)

1883 B, p. 160. (*D. "sp. undt."*)

1883 D, p. 29. (*"Diplacanthus."*)

Woodward, A. S. 1891 A, p. 24.

Devonian; Scotland, Canada?

CLIMATIUS Agassiz. Type *C. reticulatus* Agassiz.

Agassiz, L. 1844 B, p. 119.

Egerton, P. G. 1861 B, p. 28.

Nicholson and Lydekker 1889 A, p. 968.

Pictet, F. J. 1854 A, p. 293.

Powrie, J. 1864 B, p. 420 (*Climatius*); p. 425, pl. xx (*Euthacanthus*, type *E. macnicoli*).

Woodward, A. S. 1891 A, p. 28.

Woodward and Sherborn, 1890 A, p. 36.

Zittel, K. A. 1890 A, p. 168.

Climatius? latispinosus (Whiteaves).

Whiteaves, J. F. 1881 E, p. 99. (Ctenacanthus.)

Traquair, R. H. 1890 A, p. 21. (Climatius.)

Whiteaves, J. F. 1883 A, p. 355. (Ctenacanthus.)

1883 B, p. 164. (Ctenacanthus.)

1889 A, p. 95, pl. x, figs. 3-3b. (Ctenacanthus.)

Woodward, A. S. 1889 G, p. 183. (Climatius.)

1891 A, p. 33. (Climatius?)

1892 A, p. 3. (Climatius.)

Lower Devonian; New Brunswick.

Superorder ~~EL~~SELACHII,¹ *nom. nov.*

Order SELACHA Bonaparte.

Bonaparte, C. L., 1832-1841, Iconograph. Fauna Ital., iii, Introd.

The form *Selachii* of this word is employed by the following writers unless otherwise indicated. The content of the term also varies greatly with the different authors.

Agassiz, L. 1843 B (1838), iii, p. 73. ("Placoides.")

Beard, J. 1890 A.

Cope, E. D. 1872 C, p. 326.

1877 O, p. 41.

1878 A, p. 292.

1884 HH.

1885 G.

1889 R, p. 854.

1891 N, p. 15.

1898 B, p. 24.

¹This superordinal name is employed to include all *Elasmobranchii* except the *Ichthyotomi*. The living sharks and rays may be regarded as constituting the types of the group. It is quite probable that a more complete knowledge of the Paleozoic families will cause them to be removed from association with the yet living families.

Dohrn, A. 1886 A.
 Emery, C. 1897 B.
 Gadow, H., 1898 A, p. 5.
 Garman, S. 1884 C.
 Gegenbaur, C. 1895 B.
 Gill, T. 1884 B.
 1884 C.
 Goeppert, E. 1895 A.
 1895 B.
 Günther, A. 1881 A, p. 685.
 Haeckel, E., 1895 A, p. 242. (Plagiostomi.)
 Hasse, C. 1893 A.
 Haswell, W. A. 1884 A, p. 112. (Selachoidoi.)
 Howes, G. B. 1890 A.
 Jaekel, O. 1890 A.
 1890 C.
 1894 A.
 Jordan and Evermann 1896 A, p. 15.
 Kehner, F. A. 1876 A.
 Kllaatsch, H. 1894 A.

Köstlin, O. 1844 A, p. 437. ("Haifische.")
 Leidy, J. 1871 C, p. 369.
 Mayer, P. 1886 A.
 Mollier, S. 1893 A, p. 6.
 Newberry and Worthen 1866 A.
 Owen, R. 1866 A, p. 13.
 Parker, W. K. 1878 A.
 St. John and Worthen 1875 A.
 1883 A.
 Sagemehl, M. 1883 A, p. 224.
 Steinmann and Döderlein 1890 A, p. 543.
 Tomes, C. S. 1898 A, p. 240. (Selachia.)
 Stephan, P. 1900 A. ("Sélaciens.")
 Wiedersheim, R. 1889 A, p. 423.
 Woodward, A. S. 1886 A.
 1889 D, p. 30.
 1892 G.
 1895 B.
 1898 B, p. 39.
 Zittel, K. A. 1890 A, p. 60.

Suborder SQUALI.¹

Duméril, A. 1865 A, p. 309. ("Squales ou Pleuro-
 trèmes.")
 Gegenbaur, C. 1898 A.
 Gibbs, R. W. 1846 A.
 1847 A.
 1848 B.
 Gill, T. 1861 A, p. 23.
 1862 A.
 Günther, A. 1870 A, p. 353. (Selachoidoi.)
 1880 A, p. 314. (Selachoidoi.)
 Haeckel, E. 1895 A, p. 242. (Squalacei.)

Müller, J. 1846 C, p. 203. (Squalidæ.)
 Müller and Henle 1841 A.
 Owen, R. 1845 B, p. 26. ("Squaloids.")
 1847 B, p. 255.
 1860 E, p. 106. (Squalidæ.)
 Pictet, F. J. 1854 A, p. 234. ("Squalidiens.")
 Stannius, H. 1854 A. (Squalidæ.)
 Steinmann and Döderlein 1890 A, p. 545.
 Woodward, A. S. 1889 D, pp. xxxix, 157. (Aster-
 ospondyli.)

Superfamily PETALODONTOIDEA, nom. nov.

PETALODONTIDÆ.

Newberry and Worthen, 1866 A, p. 31.
 Cope, E. D. 1891 A, p. 16.
 1898 B, p. 24.
 Davis, J. W. 1883 A, pp. 331, 483.
 Jaekel, O. 1895 B.
 1898 A, p. 49 (with subfamilies Janassinæ,
 Polyrhizodontinæ, and Pristodontinæ.)
 1899 A, p. 258.
 1900 A, p. 147.

Koninck, L. G. de 1878 A, p. 29.
 Newberry, J. S. 1889 A, p. 185.
 Newberry and Worthen 1866 A, p. 46.
 Nicholson and Lydekker 1889 A, p. 927.
 Traquair, R. H. 1888 A, p. 85.
 Woodward, A. S. 1885 B, pp. 156, 226.
 1889 D, p. 35.
 1898 B, p. 50.
 Zittel, K. A. 1890 A, p. 96.

JANASSA Münster. Type *Trilobites bituminosus* Schlotheim.

Münster, G. 1839, Beiträge Petrefakt., pt. i, p. 67.
 Agassiz, L. 1843 B, iii, p. 375.
 Atthey, T. 1868 B.
 Barkas, T. P. 1868 A. (Climaxodus.)
 Cope, E. D. 1877 N, p. 52. (Strigilina, with *S. lin-*
guiformis Cope = *J. strigilina* Cope as type.)
 Davis, J. W. 1882 B, p. 60.
 Hancock and Atthey 1869 A.
 Hancock and Howes 1870 A.
 Jaekel, O. 1894 A, p. 65.
 1895 B, p. 201.
 1898 A, p. 48.
 1899 A, p. 258, pls. xiv, xv, and text figs.

McCoy, F. 1848 A, p. 128 (Climaxodus, with *C.*
imbricatus as type.)
 1855 A, p. 620.
 Miller, S. A. 1889 A, p. 591 (Climaxodus); p. 600.
 (Janassa).
 Nicholson and Lydekker 1889 A, p. 929.
 Pictet, F. J. 1854 A, p. 270 (Climaxodus); p. 282
 (Janassa).
 Woodward, A. S. 1885 B, p. 227.
 1888 E.
 1889 D, p. 34.
 Zittel, K. A. 1890 A, p. 98.

¹ Additional literature bearing on this group may be looked for under the heads "Elasmobranchii" and "Selachii."

Janassa brevis (Newb.).

- Newberry, J. S. 1856 B, p. 100. (Climaxodus.)
 Miller, S. A. 1889 A, p. 591.
 Woodward, A. S. 1889 D, p. 39. (Janassa.)
 Coal-measures; Ohio.

Janassa gurleiana Cope.

- Cope, E. D. 1877 E, p. 191. (Strigilina.)
 Case, E. C. 1900 A, p. 700, pl. i, figs. 2a-2c. (J. gurleyana.)
 Cope, E. D. 1881 K, p. 163.
 1888 BB, p. 285.
 Woodward, A. S. 1889 D, p. 39.
 Permian; Illinois.

Janassa ordiana Cope.

- Cope, E. D. 1881 K, p. 163.
 1888 BB, p. 285.
 Woodward, A. S. 1889 D, p. 39.
 Permian; Texas.

Janassa strigilina Cope.

- Cope, E. D. 1881 K, p. 163.
 Case, E. C. 1900 A, p. 699, pl. i, figs. 1a-1c.
 Cope, E. D. 1877 E, p. 191. (Strig. linguiformis.)
 1877 N, p. 52. (Strigilina linguiformis Cope,
 not of Atthey.)
 1888 BB, p. 285.
 Miller, S. A. 1889 A, p. 600. (J. linguiformis.)
 Woodward, A. S. 1889 D, p. 38.
 Permian; Illinois.

PELTODUS Newb. and Worth. Type *P. unguiformis* Newb. and Worth.

- Newberry and Worthen 1870 A, p. 362.
 Jaekel, O. 1899 A, p. 278.
 Miller, S. A. 1889 A, p. 605.
 St. John and Worthen 1875 A, p. 409.
 Woodward, A. S. 1889 D, pp. 34, 39. (Syn. of
 Janassa.)

Peltodus ? plicomphalus St. J. and Worth.

- St. John and Worthen 1875 A, p. 411, pl. xiii, fig. 9.
 Lesley, J. P. 1889 A, p. 614, figures.
 Woodward, A. S. 1889 D, p. 39. (Janassa.)
 Subcarboniferous (Chester); Illinois.

Peltodus pulvinulus Newb. and Worth.

- Newberry and Worthen 1870 A, p. 362.
 Subcarboniferous; Illinois.

Peltodus quadratus St. J. and Worth.

- St. John and Worthen 1875 A, p. 410, pl. xiii, figs. 6, 7.
 Keyes, C. R. 1894 A, p. 232.
 Lesley, J. P. 1889 A, p. 614, figures.
 Woodward, A. S. 1889 D, p. 39. (Janassa.)
 Subcarboniferous (St. Louis); Illinois, Mis-
 souri.

Peltodus transversus St. J. and Worth.

- St. John and Worthen 1875 A, p. 412, pl. xiii, fig. 8.
 Lesley, J. P. 1889 A, p. 614, figure.
 Woodward, A. S. 1889 D, p. 39. (Janassa.)
 Coal-measures; Illinois.

Peltodus unguiformis Newb. and Worth.

- Newberry and Worthen 1870 A, p. 363, pl. ii, fig. 7.
 Woodward, A. S. 1889 D, p. 39. (Janassa.)
 Coal-measures; Illinois.

TANAODUS St. J. and Worth. Type, none named.

- St. John and Worthen 1875 A, p. 367.
 Jaekel, O. 1899 A, p. 278.
 Koninck, L. G. de 1878 A, p. 52.
 Miller, S. A. 1889 A, p. 612.
 Woodward, A. S. 1889 D, pp. 34, 39. (Syn. of
 Janassa.)

Tanaodus angularis (Newb. and Worth.).

- Newberry and Worthen 1866 A, p. 55, pl. iii, figs. 16,
 16a. (Chomatodus angularis in text; C. angu-
 latus on plate.)
 St. John and Worthen 1875 A, p. 368. (T. angu-
 latus.)
 Woodward, A. S. 1889 D, p. 48. (Petalodus.)
 Coal-measures; Illinois.

Tanaodus bellicinctus St. J. and Worth.

- St. John and Worthen 1875 A, p. 376, pl. xi, figs.
 14-16, 25.
 Lesley, J. P. 1890 A, p. 1156, figures.
 Woodward, A. S. 1889 D, p. 39. (Janassa.)
 Subcarboniferous (Chester); Illinois.

Tanaodus depressus St. J. and Worth.

- St. John and Worthen 1875 A, p. 378, pl. xi, figs.
 11-13.
 Lesley, J. P. 1890 A, p. 1156, figures.
 Woodward, A. S. 1889 D, p. 39. (Janassa.)
 Subcarboniferous (Chester); Illinois.

Tanaodus gracillimus (Newb. and Worth.).

- Newberry and Worthen 1866 A, p. 51, pl. iii, figs. 12,
 12a. (Chomatodus.)
 Miller, S. A. 1889 A, p. 613, fig. 1176.
 St. John and Worthen, 1875 A, p. 368.
 Woodward, A. S. 1889 D, p. 48. (Petalodus.)
 Subcarboniferous (Burlington); Iowa.

Tanaodus grossiplicatus St. J. and Worth.

- St. John and Worthen 1875 A, p. 375, pl. xi, fig. 26.
 Lesley, J. P. 1890 A, p. 1156, figures.
 Woodward, A. S. 1889 D, p. 39. (Janassa.)
 Subcarboniferous (Chester); Illinois.

Tanaodus multiplicatus (Newb. and Worth.).

Newberry and Worthen 1866 A, p. 57, pl. iii, figs. 18, 18a. (Chomatodus.)

Koninek, L. G. de 1878 A, p. 53, pl. vi, figs. 10, 11.

Lesley, J. P. 1890 A, p. 1157, figures.

St. John and Worthen, 1875 A, p. 368.

Sauvage, H. E. 1888 A, p. 47.

Woodward, A. S. 1889 D, p. 49. (Petalodus.)

Subcarboniferous (Burlington); Iowa. Also in Subcarboniferous of Belgium.

Tanaodus obscurus (Leidy).

Leidy, J. 1857 H, p. 89, pl. v, figs. 22, 23. (Chomatodus.)

St. John and Worthen, 1875 A, p. 368.

Woodward, A. S. 1889 D, p. 228. (Chomatodus.)

Coal-measures; Illinois.

Tanaodus polymorphus St. J. and Worth.

St. John and Worthen 1875 A, p. 380, pl. xi, figs. 17-19, 24.

Lesley, J. P. 1890 A, p. 1157, figures.

Woodward, A. S. 1889 D, p. 39. (Janassa.)

Subcarboniferous (Chester); Illinois.

CYMATODUS Newb. and Worth. Type *C. oblongus*, Newb. and Worth.

Newberry and Worthen 1870 A, p. 363.

Miller, S. A. 1889 A, p. 594.

Woodward, A. S. 1889 D, pp. 39, 458.

Tanaodus prænuntius St. J. and Worth.

St. John and Worthen 1875 A, p. 371, pl. xi, figs. 6-10.

Keyes, C. R. 1894 A, p. 231.

Lesley, J. P. 1890 A, p. 1158, figures.

Woodward, A. S. 1889 D, p. 39. (Janassa.)

Subcarboniferous (St. Louis); Illinois, Iowa, Missouri.

Tanaodus pumilis St. J. and Worth.

St. John and Worthen 1875 A, p. 369, pl. xi, figs. 1-5.

Lesley, J. P. 1890 A, p. 1158, figures.

Woodward, A. S. 1889 D, p. 39. (Janassa.)

Subcarboniferous (St. Louis); Illinois, Iowa.

Tanaodus sculptus St. J. and Worth.

St. John and Worthen 1875 A, p. 373, pl. xi, figs. 20-23.

Keyes, C. R. 1894 A, p. 231.

Lesley, J. P. 1890 A, p. 1158, figures.

Woodward, A. S. 1889 D, p. 39. (Janassa.)

Subcarboniferous (St. Louis); Illinois, Iowa, Missouri.

Tanaodus sublunatus St. J. and Worth.

St. John and Worthen 1875 A, p. 368, pl. xi, fig. 27.

Lesley, J. P. 1890 A, p. 1159, figures.

Woodward, A. S. 1889 D, p. 39. (Janassa.)

Subcarboniferous (St. Louis); Illinois.

THORACODUS Cope. Type *T. emydinus* Cope.

Cope, E. D. 1883 K, p. 108.

Miller, S. A. 1889 A, p. 613.

Woodward, A. S. 1889 D, p. 39. (=Janassa?).

Probably a synonym of Janassa.

Thoracodus emydinus Cope.

Cope, E. D. 1883 K, p. 108.

Case, E. C. 1900 A, p. 702.

Miller, S. A. 1889 A, p. 613. (T. eurydinus.)

Woodward, A. S. 1889 D, p. 39.

Permian; Illinois.

FISSODUS St. J. and Worth. Type *F. bifidus* St. J. and Worth.

St. John and Worthen 1875 A, p. 413.

Jaekel, O. 1895 B, p. 201. (Syn. of Petalodus.)

1899 A, p. 289.

Miller, S. A. 1889 A, p. 597.

Nicholson and Lydekker 1889 A, p. 929.

Woodward, A. S. 1889 D, p. 40.

Fissodus bifidus St. J. and Worth.

St. John and Worthen 1875 A, p. 414, pl. xiii, figs. 1, 2.

CHOLODUS St. J. and Worth. Type *C. inæqualis* St. J. and Worth.

St. John and Worthen 1875 A, p. 415.

Miller, S. A. 1889 A, p. 590.

Woodward, A. S. 1889 D, p. 40.

Cholodus inæqualis St. J. and Worth.

St. John and Worthen 1875 A, p. 416, pl. xiii, figs. 4, 5.

Miller, S. A. 1889 A, p. 590, fig. 1108.

Coal-measures; Illinois, Iowa.

PETALORHYNCHUS Newb. and Worth. Type *Petalodus psittacinus* McCoy.

Newberry and Worthen 1866 A, p. 32.

Davis, J. W. 1882 A.

1882 B, p. 60.

1883 A, pp. 485, 516.

Jaekel, O. 1895 B. (Syn. of *Petalodus*.)

1899 A, p. 286.

Miller, S. A. 1889 A, p. 606.

Nicholson and Lydekker 1889 A, p. 929.

Woodward, A. S. 1889 D, p. 40.

Zittel, K. A. 1890 A, p. 97.

Petalorhynchus distortus St. J. and Worth.

St. John and Worthen 1875 A, p. 406, pl. xii, figs.

7, 8.

Keyes, C. R. 1894 A, p. 232.

Lesley, J. P. 1889 A, p. 626, figures.

Woodward, A. S. 1889 D, p. 42.

Subcarboniferous (St. Louis); Illinois, Iowa, Missouri.

Petalorhynchus pseudosagittatus St. J. and Worth.

St. John and Worthen 1875 A, p. 405, pl. xii, figs.

1-4.

PETALODUS Owen. Type *P. hastingsi* Agassiz.

Owen, R. 1845 B, p. 61, pl. xxii.

Barkas, W. J. 1874 A, p. 536.

Davis, J. W. 1882 A.

1882 B, p. 58.

1883 A, p. 484.

Hancock and Atthey, 1869 A.

Hancock and Howes, 1870 A, pp. 54, 61.

Jaekel, O. 1895 B.

1899 A, p. 286.

Koninek, L. G. de 1878 A, p. 49.

Leidy, J. 1855 D (Sicarius, type *S. extinctus*).

1856 S, p. 161.

McCoy, F. 1855 A, p. 635.

Miller, S. A. 1889 A, p. 605.

Newberry and Worthen 1866 A, pp. 31, 46.

Nicholson and Lydekker 1889 A, p. 930.

Pictet, F. J. 1854 A, p. 270.

Trautschold, H. 1874 B, p. 293.

Woodward, A. S. 1885 B, pp. 156, 226.

1889 D, p. 42.

Zittel, K. A. 1890 A, p. 97.

Petalodus curtus Newb. and Worth.

Newberry and Worthen 1870 A, p. 355, pl. iii, fig. 2.

Lesley, J. P. 1889 A, p. 625, figures.

St. John and Worthen 1875 A, p. 394, pl. xii, figs.

12-12c (with ?).

Woodward, A. S. 1889 D, p. 47.

Subcarboniferous (Keokuk); Illinois, Iowa.

Petalodus hybridus St. J. and Worth.

St. John and Worthen 1875 A, p. 394, pl. xii, fig. 10.

Woodward, A. S. 1889 D, p. 47.

Subcarboniferous (St. Louis); Illinois.

Keyes, C. R. 1894 A, p. 232.

Lesley, J. P. 1889 A, p. 626, figures.

Woodward, A. S. 1889 D, p. 42.

Subcarboniferous (St. Louis); Illinois, Missouri, Iowa.

Petalorhynchus spatulatus St. J. and Worth.

St. John and Worthen 1875 A, p. 408, pl. xii, figs.

5, 6.

Lesley, J. P. 1889 A, p. 626, figures.

Woodward, A. S. 1889 D, p. 42.

Subcarboniferous (St. Louis); Illinois, Iowa?

Petalorhynchus striatus Newb. and Worth.

Newberry and Worthen 1866 A, p. 40, pl. ii, figs.

8-8b.

Lesley, J. P. 1889 A, p. 626, figures.

1895 A, pl. dlxxi.

Woodward, A. S. 1889 D, p. 42.

Subcarboniferous (Burlington); Illinois.

Petalodus knappi Newb.

Newberry, J. S. 1879 A, p. 345.

Kindle, E. M. 1898 A, p. 485.

Woodward, A. S. 1889 D, p. 47.

Subcarboniferous (Keokuk); Indiana.

Petalodus linguifer Newb. and Worth.

Newberry and Worthen 1866 A, p. 37, pl. ii, figs.

4-5c.

Hambach, G. 1890 A, p. 81.

Leidy, J. 1876 C.

Woodward, A. S. 1889 D, p. 47.

Subcarboniferous (Chester); Illinois, Missouri (*vide* Hambach).

Petalodus ohioensis Safford.

Safford, J. M. 1853 A, figs. 1, 2. (*Petalodus*, *err. typ.*)

Eastman, C. R. 1896 D, p. 174. (P. *alleghaniensis*.)

Hambach, G. 1890 A, p. 81. (P. *destructor*.)

Hay, O. P. 1895 C. (P. *ohioensis*, P. *securis*.)

Leidy, J. 1855 D. (*Stearius extinctus*.)

1856 S. p. 161, pl. xvi, figs. 4-6. (P. *alleg.*)

1859 C. (P. *alleg.*)

1873 B, pp. 312, 353, pl. xvii, fig. 3. (P. *alleg.*)

Lesley, J. P. 1889 A, p. 624, figures. (P. *alleg.*)

1895 A, pl. dlxxi. (P. *alleg.*, P. *destructor*.)

Miller, S. A. 1889 A, p. 605, fig. 1157. (P. *alleg.*)

Newberry, J. S. 1875 A, p. 52, pl. lviii, figs. 13, 13a, (P. *alleg.*, P. *destructor*.)

Newberry and Worthen 1866 A, p. 35, pl. ii, figs. 1-3. (P. *destructor*.)

St. John, O. 1870 A, p. 433. (P. *destructor*.)

1872 A, p. 240, pl. iii, fig. 5.

St. John and Worthen 1875 A, p. 396. (P. alleg.)
 Woodward, A. S. 1889 D, p. 46.
 Coal-measures; Pennsylvania, Ohio, Illinois,
 Nebraska, Arkansas, Missouri.

ANTLIODUS Newb. and Worth. Type, *A. mucronatus* Newb. and Worth.

Newberry and Worthen 1866 A, p. 33.
 Davis, J. W. 1883 A, p. 485.
 Koninck, L. G. de 1878 A, p. 51.
 Miller, S. A. 1889 A, p. 587.
 Newberry, J. S. 1889 A, p. 185.
 St. John and Worthen, 1875 A, p. 368.
 Woodward, A. S. 1889 D, pp. 42, 48. (Syn. of *Petalodus*.)
 Woodward and Sherborn 1890 A, p. 145. (Syn. of *Petalodus*.)
 Zittel, K. A. 1890 A, p. 97.

Antliodus arcuatus Newb.

Newberry, J. S. 1889 A, p. 208, pl. xix, figs. 3, 4.
 Kindle, E. M. 1898 A, p. 484.
 Subcarboniferous (St. Louis); Indiana.

Antliodus cucullus Newb. and Worth.

Newberry and Worthen 1866 A, p. 41, pl. iii, figs. 1-1b.
 Woodward, A. S. 1889 D, p. 48. (*Petalodus*.)
 Subcarboniferous (Keokuk); Illinois.

Antliodus gracilis St. J. and Worth.

St. John and Worthen 1875 A, p. 393, pl. xi, fig. 29.
 Woodward, A. S. 1889 D, p. 48. (*Petalodus*.)
 Subcarboniferous (Warsaw); Illinois.

Antliodus minutus Newb. and Worth.

Newberry and Worthen 1866 A, p. 43, pl. iii, figs. 3-3b.
 Kindle, E. M. 1898 A, p. 484.
 Koninck, L. G. de 1878 A, p. 52, pl. vi, fig. 9.
 Newberry, J. S. 1879 A, p. 341.
 Sauvage, H. E. 1888 A, p. 47.
 Woodward, A. S. 1889 D, p. 48. (*Petalodus*.)
 Subcarboniferous; Europe: (Keokuk); Illinois: (St. Louis); Indiana.

Antliodus mucronatus Newb. and Worth.

Newberry and Worthen 1866 A, p. 38, pl. ii, figs. 6-6b.
 Woodward, A. S. 1889 D, p. 48. (*Petalodus*.)
 Subcarboniferous (St. Louis); Illinois.

Antliodus parvulus Newb. and Worth.

Newberry and Worthen 1866 A, p. 38, pl. ii, figs. 7-7a.

Petalodus proximus St. J. and Worth.

St. John and Worthen 1875 A, p. 395, pl. xii, fig. 11.
 Woodward, A. S. 1889 D, p. 48.
 Coal-measures; Illinois.

Woodward, A. S. 1889 D, p. 48. (*Petalodus*.)
 Subcarboniferous (Burlington, Keokuk); Illinois.

Antliodus perovalis St. J. and Worth.

St. John and Worthen 1875 A, p. 393, pl. xi, fig. 28.
 Woodward, A. S. 1889 D, p. 48. (*Petalodus*.)
 Subcarboniferous (Warsaw); Illinois.

Antliodus politus Newb. and Worth.

Newberry and Worthen 1866 A, p. 42, pl. iii, figs. 2, 2a.
 Woodward, A. S. 1889 D, p. 48. (*Petalodus*.)
 Subcarboniferous (Keokuk); Illinois.

Antliodus robustus Newb. and Worth.

Newberry and Worthen 1866 A, p. 39, pl. ii, figs. 9-9c.
 Woodward, A. S. 1889 D, p. 48. (*Petalodus*.)
 Subcarboniferous (Chester); Illinois.

Antliodussarcululus Newb. and Worth.

Newberry and Worthen 1870 A, p. 356, pl. iii, figs. 8-8b.
 Woodward, A. S. 1889 D, p. 453. (*Petalodus*.)
 Subcarboniferous (Burlington); Iowa.

Antliodus similis Newb. and Worth.

Newberry and Worthen 1866 A, p. 41, pl. ii, figs. 10, 10a.
 Kindle, E. M. 1898 A, p. 484.
 Newberry, J. S. 1879 A, p. 346.
 Woodward, A. S. 1889 D, p. 48. (*Petalodus*.)
 Subcarboniferous (Keokuk); Illinois, Indiana.

Antliodus simplex Newb. and Worth.

Newberry and Worthen 1866 A, p. 44, pl. iii, figs. 4, 4a.
 Woodward, A. S. 1889 D, p. 48. (*Petalodus*.)
 Subcarboniferous (Burlington); Iowa.

Antliodus sulcatus Newb. and Worth.

Newberry and Worthen 1866 A, p. 45, pl. iii, figs. 5, 5a.
 Woodward, A. S. 1889 D, p. 48. (*Petalodus*.)
 Subcarboniferous (Keokuk); Illinois.

CHOMATODUS Agassiz. Type *C. linearis* Agassiz.

Agassiz, L. 1843 B (1838), iii, p. 108.
 1844 A.

Davis, J. W. 1883 A, p. 507.
 Destinez, P. 1898 A, p. 220.
 Koninck, L. G. de 1878 A, p. 45.
 Leidy, J. 1857 H, p. 89. (*Palæobatis*, type *P. insignis* Leidy.)
 McCoy, F. 1855 A, p. 617.

Miller, S. A. 1889 A, p. 590 (*Chomatodus*); p. 604 (*Palæobatis*).
 Newberry, J. S. 1889 A, p. 186.
 Newberry and Worthen 1866 A, p. 34.
 Owen, R. 1845 B, p. 61.
 Pictet, F. J. 1854 A, p. 266.
 St. John and Worthen 1875 A, p. 367.

Woodward, A. S. 1889 D, p. 48 (Syn. of *Petalodus*); p. 228 (*Chomatodus*).

Woodward and Sherborn 1890 A, p. 32.

Zittel, K. A. 1890 A, p. 97.

***Chomatodus affinis* Newb. and Worth.**

Newberry and Worthen 1866 A, p. 54, pl. iii, figs. 15, 15a.

Woodward, A. S. 1889 D, p. 48. (*Petalodus*.)

* Subcarboniferous (Keokuk); Illinois.

***Chomatodus angustus* Newb.**

Newberry, J. S. 1879 A, p. 342.

Kindle, E. M. 1898 A, p. 484.

Woodward, A. S. 1889 D, p. 228.

Subcarboniferous (St. Louis); Indiana.

***Chomatodus arcuatus* St. John.**

St. John, O. 1870 A, p. 435.

Destinez, P. 1898 A, p. 221.

St. John, O. 1872 p. 243, pl. vi, figs. 14a, 14b.

St. John and Worthen 1875 A, pl. x, figs. 23a, 23b.

Woodward, A. S. 1889 D, p. 228.

Coal-measures; Iowa, Nebraska, Belgium.

***Chomatodus chesterensis* St. J. and Worth.**

St. John and Worthen 1875 A, p. 363, pl. x, figs. 15-17d.

Woodward, A. S. 1889 D, p. 228.

Subcarboniferous (Chester); Illinois.

***Chomatodus comptus* St. J. and Worth.**

St. John and Worthen 1875 A, p. 356, pl. x, figs. 19-22.

Woodward, A. S. 1889 D, p. 228.

Subcarboniferous (Burlington); Iowa.

***Chomatodus costatus* Newb. and Worth.**

Newberry and Worthen 1866 A, p. 85, pl. v, figs. 17, 17a.

Woodward, A. S. 1889 D, p. 459.

Subcarboniferous (Keokuk); Illinois.

***Chomatodus cultellus* Newb. and Worth.**

Newberry and Worthen 1866 A, p. 52, pl. iii, figs. 13, 13a.

St. John and Worthen 1875 A, p. 359.

Woodward, A. S. 1889 D, p. 48. (*Petalodus*.)

Subcarboniferous (Chester); Illinois.

***Chomatodus elegans* Newb. and Worth.**

Newberry and Worthen 1866 A, p. 86, pl. v, figs. 18-18b.

Woodward, A. S. 1889 D, p. 228.

Subcarboniferous (Keokuk); Iowa.

***Chomatodus inconstans* St. J. and Worth.**

St. John and Worthen 1875 A, p. 360, pl. x, figs. 5-14.

Woodward, A. S. 1889 D, p. 228.

Subcarboniferous (St. Louis); Iowa.

***Chomatodus incrassatus* St. J. and Worth.**

St. John and Worthen 1875 A, p. 359, pl. x, fig. 18.

Keyes, C. R. 1894 A, p. 231.

Miller, S. A. 1889 A, p. 590, fig. 1109.

Woodward, A. S. 1889 D, p. 458. (*Petalodus*.)

Subcarboniferous (St. Louis); Illinois, Iowa, Missouri.

***Chomatodus insignis* (Leidy).**

Leidy, J. 1857 H, p. 89, pl. v, figs. 24-26. (*Palæobatis*.)

Miller, S. A. 1889 A, p. 604. (*Palæobatis*.)

St. John and Worthen 1875 A, p. 359, pl. x A, figs. 5-5c.

Woodward, A. S. 1889 D, p. 48. (*Petalodus*.)

Subcarboniferous (St. Louis); Missouri, Illinois.

Woodward regards the identification of Leidy's species with that of *St. John* and *Worthen* as doubtful.

***Chomatodus loriformis* Newb. and Worth.**

Newberry and Worthen 1866 A, p. 58, pl. iii, figs. 19, 19a.

Woodward, A. S. 1889 D, p. 49. (*Petalodus*.)

Subcarboniferous (Keokuk); Illinois.

***Chomatodus molaris* Newb. and Worth.**

Newberry and Worthen 1866 A, p. 56, pl. iii, figs. 17, 17a.

Woodward, A. S. 1889 D, p. 49. (*Petalodus*.)

Subcarboniferous (Keokuk); Illinois.

***Chomatodus newberryi* nom. nov.**

Kindle, E. M. 1898 A, p. 484. (C. obliquus.)

Newberry, J. S. 1879 A, p. 342. (C. obliquus, not of McCoy, 1848.)

Woodward, A. S. 1889 D, p. 228. (C. obliquus.)

Subcarboniferous (St. Louis); Indiana.

***Chomatodus parallelus* St. J. and Worth.**

St. John and Worthen 1875 A, p. 358, pl. x A, figs. 3, 4.

Keyes, C. R. 1894 A, p. 231.

Woodward, A. S. 1889 D, p. 49. (*Petalodus*.)

Subcarboniferous (Warsaw); Illinois, Missouri.

***Chomatodus pusillus* Newb. and Worth.**

Newberry and Worthen 1866 A, p. 53, pl. iii, figs. 14-14b.

Kindle, E. M. 1898 A, p. 484.

Woodward, A. S. 1889 D, p. 49. (*Petalodus*.)

Subcarboniferous (Keokuk); Illinois, Indiana.

***Chomatodus selliformis* Newb.**

Newberry, J. S. 1879 A, p. 341.

Kindle, E. M. 1898 A, p. 484.

Woodward, A. S. 1889 D, p. 228.

Subcarboniferous (St. Louis); Illinois, Indiana.

***Chomatodus varsouviensis* St. J. and Worth.**

St. John and Worthen 1875 A, p. 363, pl. x, figs. 1-4b.

Woodward, A. S. 1889 D, p. 228.

Subcarboniferous (Warsaw); Illinois, Missouri.

Lisgodus St. J. and Worth. Type *L. curtus* St. J. and Worth.

St. John and Worthen 1875 A, p. 363.

Miller, S. A. 1889 A, p. 601.

Woodward, A. S. 1889 D, p. 49.

Lisgodus affinis Newb.

Newberry, J. S. 1879 A, p. 343.

Kindle, E. M. 1898 A, p. 484.

Woodward, A. S. 1889 D, p. 49.

Subcarboniferous (St. Louis); Illinois, Missouri, Indiana.

Lisgodus curtus St. J. and Worth.

St. John and Worthen 1875 A, p. 364, pl. xA, figs. 20-22.

Keyes, C. R. 1894 A, p. 231.

Miller, S. A. 1889 A, p. 601, fig. 1143.

Woodward, A. S. 1889 D, p. 49.

Subcarboniferous (Burlington); Iowa, Illinois, Missouri.

Lisgodus selluliformis St. J. and Worth.

St. John and Worthen, 1875 A, p. 366, pl. xA, fig. 16.

Keyes, C. R. 1894 A, p. 231.

Woodward, A. S. 1889 D, p. 49.

Subcarboniferous (St. Louis); Illinois, Missouri.

Lisgodus serratus St. J. and Worth.

St. John and Worthen 1875 A, p. 365, pl. xA, figs. 17-19.

Woodward, A. S. 1889 D, p. 49.

Subcarboniferous (Burlington); Iowa, Illinois.

Calopodus St. J. and Worth. Type *C. apicalis* St. J. and Worth.

St. John and Worthen 1875 A, p. 403.

Miller, S. A. 1889 A, p. 589.

Woodward, A. S. 1889 D, p. 49.

Calopodus apicalis St. J. and Worth.

St. John and Worthen 1875 A, p. 403, pl. xii, figs. 16, 17.

Miller, S. A. 1889 A, p. 589, fig. 1105.

Woodward, A. S. 1889 D, p. 49.

Coal-measures, Iowa.

Ctenopetalus Davis. Type *Petalodus serratus* Owen.

Davis, J. W. 1881 A, p. 426. (Ex. Agass. MSS.)
1882 B, p. 59.

McCoy, F. 1855 A, p. 626. (Ctenopterychius.)

Miller, S. A. 1889 A, p. 594.

Newberry, J. S. 1889 A, p. 186.

Pictet, F. J. 1854 A, p. 264. (Ctenopterychius.)

Ward, J. 1890 A, p. 141. (Ctenopterychius.)

Woodward, A. S. 1889 D, p. 49. (Syn. of Ctenopterychius.)

Woodward and Sherborn 1890 A, p. 54. (Syn. of Ctenopterychius.)

Zittel, K. A. 1890 A, p. 99.

Woodward, A. S. 1889 D, p. 53. (Ctenopterychius.)
Subcarboniferous (Chester); Illinois.

Ctenopetalus medius St. J. and Worth.

St. John and Worthen 1875 A, p. 400, pl. xA, fig. 26.

Woodward, A. S. 1889 D, p. 53. (Ctenopterychius.)

Subcarboniferous (Chester); Illinois.

Ctenopetalus occidentalis St. J. and Worth.

St. John and Worthen 1875 A, p. 401, pl. xii, fig. 14.

Miller, S. A. 1889 A, p. 594, fig. 1120.

Woodward, A. S. 1889 D, p. 53. (Ctenopterychius.)

Coal-measures; Iowa.

Ctenopetalus vinosus St. J. and Worth.

St. John and Worthen 1875 A, p. 396, pl. xii, fig. 13.

Woodward, A. S. 1889 D, p. 54. (Ctenopterychius.)

Subcarboniferous (Keokuk); Iowa.

Ctenopetalus bellulus St. J. and Worth.

St. John and Worthen 1875 A, p. 398, pl. xii, fig. 9.
[C. (*Petalodus*).]

Woodward, A. S. 1889 D, p. 53. (Ctenopterychius.)
Subcarboniferous (St. Louis); Iowa, Illinois.

Ctenopetalus limatulus St. J. and Worth.

St. John and Worthen 1875 A, p. 399, pl. xii, fig. 18.

Ctenopterychius Agassiz. Type *C. apicalis* Agassiz.

Agassiz, L. 1843 B (1838), iii, p. 99.
1844 A.

Barkas, W. J. 1873 A, p. 18.

1874 A, pp. 439, 482, 533.

Davis, J. W. 1881 A, p. 425.

Jaekel, O. 1895 B, p. 201.

1899 A, p. 286.

Miller, S. A. 1889 A, p. 594 (Ctenopterychius); p. 605 (Peripristis).

Newberry, J. S. 1875 A, p. 52.

1889 A, p. 186.

Newberry and Worthen 1866 A, pp. 33, 73.

Nicholson and Lydekker 1889 A, p. 930.

Owen, R. 1845 B, p. 61.

Pictet, F. J. 1854 A, p. 264.

St. John, O. 1870 A, p. 434. (Peripristis, type *P. semicircularis*.)

1872 A, p. 241. (Peripristis.)

Stock, T. 1882 A.

1885 B, p. 227.

Woodward, A. S. 1889 D, p. 49.

Woodward and Sherborn 1890 A, p. 54.

Zittel, K. A. 1890 A, p. 99.

Ctenoptychius acuminatus (St. J. and Worth.).

St. John and Worthen 1875 A, p. 402, pl. xA, figs. 6-6d. (Pristodus?)

Lesley, J. P. 1889 A, p. 745, figures. (Pristodus?)

Woodward, A. S. 1889 D, p. 53.

Subcarboniferous (Kinderhook); Iowa.

Ctenoptychius cristatus Dawson.

Dawson, J. W. 1868 A, p. 209, fig. 52.

1878 A, p. 209, fig. 52.

Lesley, J. P. 1895 A, pl. dlxx.

Miller, S. A. 1889 A, p. 594, fig. 1121.

Woodward, A. S. 1889 D, p. 56.

Coal-measures; Nova Scotia.

Ctenoptychius pertenuis St. J. and Worth.

St. John and Worthen 1875 A, p. 382, pl. xA, fig. 27.

HARPACODUS St. J. and Worth. Type *H. occidentalis* St. J. and Worth.

St. John and Worthen 1875 A, p. 354. (Ex. Agass. MSS.)

Davis, J. W. 1881 A, p. 426.

1883 A, p. 514.

Miller, S. A. 1889 A, p. 598.

Newberry, J. S. 1889 A, p. 186.

Woodward, A. S. 1889 D, p. 49. (Syn. of *Ctenoptychius*.)

Zittel, K. A. 1890 A, p. 99.

Harpacodus compactus St. J. and Worth.

St. John and Worthen 1875 A, p. 355, pl. xA, figs. 1-1b.

POLYRHIZODUS McCoy. Type *P. magnus* McCoy.

McCoy, F. 1848 A, p. 125.

Davis, J. W. 1883 A, pp. 485-499.

Jaekel, O. 1895 B.

1899 A, p. 278.

McCoy, F. 1855 A, p. 641.

Miller, S. A. 1889 A, p. 594 (*Dactylodus*); p. 607 (*Polyrhizodus*).

Newberry, J. S. 1897 A, p. 294. (*Dactylodus*.)

Newberry and Worthen 1866 A, p. 33 (*Dactylodus*, type *D. princeps*); p. 34 (*Polyrhizodus*).

Nicholson and Lydekker 1889 A, p. 930. (*Polyrhizodus*, *Dactylodus*.)

Pietet, F. J. 1854 A, p. 271.

Trautschold, H. 1874 B, p. 294 (*Dactylodus*); p. 296 (*Polyrhizodus*).

Woodward, A. S. 1889 D, p. 56.

Zittel, K. A. 1890 A, p. 97.

Polyrhizodus amplius St. J. and Worth.

St. John and Worthen 1875 A, p. 387, pl. xiii, fig. 13.

Keyes, C. R. 1894 A, p. 232.

Lesley, J. P. 1889 A, p. 732, figures.

Woodward, A. S. 1889 D, p. 53.

Subcarboniferous (Chester); Illinois.

Ctenoptychius semicircularis Newb. and Worth.

Newberry and Worthen 1866 A, p. 72, pl. iv, figs. 18-18b.

Kindle, E. M. 1898 A, p. 484 (*Ctenoptychius*); p. 485 (*Peripristis*).

Miller, S. A. 1889 A, p. 605, fig. 1156. (*Peripristis*.)

Newberry, J. S. 1875 A, p. 52, pl. lviii, fig. 14.

St. John, O. 1870 A, p. 434. (*Peripristis*.)

1872 A, p. 242, pl. iii, figs. 3, 4; pl. iv, figs. 20-20b.

Woodward, A. S. 1889 D, p. 53.

Coal-measures; Ohio, Indiana, Nebraska.

Ctenoptychius stevensoni St. J. and Worth.

St. John and Worthen 1875 A, p. 383, pl. xii, fig. 15.

Woodward, A. S. 1889 D, p. 54.

Coal-measures; West Virginia.

Woodward, A. S. 1889 D, p. 53. (*Ctenoptychius*).

Subcarboniferous (Chester); Illinois.

Harpacodus occidentalis St. J. and Worth.

St. John and Worthen 1875 A, p. 355, pl. xA, figs. 2-2d.

Keyes, C. R. 1894 A, p. 230.

Miller, S. A. 1889 A, p. 599, fig. 1135.

Woodward, A. S. 1889 D, p. 53. (*Ctenoptychius*.)
Subcarboniferous (St. Louis); Illinois, Missouri.

Woodward, A. S. 1889 D, p. 59.
Subcarboniferous (St. Louis); Illinois, Missouri.

Polyrhizodus carbonarius St. J. and Worth.

St. John and Worthen 1875 A, p. 389, pl. xA, figs. 24, 25; pl. xiii, fig. 1.

Lesley, J. P. 1889 A, p. 732, figures.

Woodward, A. S. 1889 D, p. 59.

Coal-measures; Illinois.

Polyrhizodus concavus (St. J. and Worth.).

St. John and Worthen 1875 A, p. 390, pl. xiii, figs. 17, 18. (*Dactylodus*.)

Miller, S. A. 1889 A, p. 594, fig. 1123. (*Dactylodus*.)

Queenstedt, F. A. 1885 A, p. 294, pl. xxiii, fig. 31. (*Dactylodus*.)

Woodward, A. S. 1889 D, p. 59.

Subcarboniferous (St. Louis); Illinois.

Polyrhizodus dentatus Newb. and Worth.

Newberry and Worthen 1866 A, p. 50, pl. iii, figs. 10, 10a.

Lesley, J. P. 1889 A, p. 733, figures.

Woodward, A. S. 1889 D, p. 59.

Subcarboniferous (Chester); Illinois.

Polyrhizodus digitatus (Leidy).

Leidy, J. 1857 H, p. 90, pl. v, figs. 27-29. (Ctenoptychius.)

Newberry and Worthen 1866 A, p. 47. (Dactylodus.)

1866 A, p. 47, pl. iii, figs. 7, 7a. (Dactylodus lobatus.)

Woodward, A. S. 1889 D, p. 59. (P. lobatus.)

Subcarboniferous (St. Louis); Illinois, Missouri.

Polyrhizodus excavatus (St. J. and Worth.).

St. John and Worthen 1866 A, p. 392; pl. xiii, fig. 16. (Dactylodus.)

Woodward, A. S. 1889 D, p. 59.

Subcarboniferous (Chester); Illinois.

Polyrhizodus inflexus (Newb. and Worth.).

Newberry and Worthen 1866 A, p. 48, pl. iii, figs. 8, 8a. (Dactylodus.)

Woodward, A. S. 1889 D, p. 59.

Subcarboniferous (Chester); Illinois.

Polyrhizodus latus Newberry.

Newberry, J. S. 1897 A, p. 296, pl. xxiii, figs. 7, 7a. (Dactylodus.)

Subcarboniferous (St. Louis); Illinois.

Polyrhizodus littoni Newb. and Worth.

Newberry and Worthen 1870 A, p. 357, pl. iv, figs. 10, 10a.

Keyes, C. R. 1894 A, p. 232.

Kindle, E. M. 1898 A, p. 485.

Lesley, J. P. 1889 A, p. 733, figures.

Miller, S. A. 1889 A, p. 607, fig. 1160.

Newberry, J. S. 1889 A, p. 209, pl. xix, figs. 5, 6.

Woodward, A. S. 1889 D, p. 59.

Subcarboniferous (St. Louis); Missouri, Indiana.

Polyrhizodus minimus (St. J. and Worth.).

St. John and Worthen 1875 A, p. 391, pl. xiii, fig. 19. (Dactylodus.)

Woodward, A. S. 1889 D, p. 60.

Subcarboniferous (St. Louis); Illinois.

Polyrhizodus modestus Newb.

Newberry, J. S. 1875 A, p. 50, pl. lviii, figs. 10, 10a.

Lesley, J. P. 1889 A, p. 733, figures.

Miller, S. A. 1889 A, p. 607, fig. 1161.

Woodward, A. S. 1889 D, p. 60.

Subcarboniferous; Ohio.

Polyrhizodus nanus St. J. and Worth.

St. John and Worthen 1875 A, p. 386, pl. xiii, fig. 15.

Lesley, J. P. 1889 A, p. 733, figures.

Woodward, A. S. 1889 D, p. 60.

Subcarboniferous (Keokuk); Iowa.

Polyrhizodus piasaënsis St. J. and Worth.

St. John and Worthen 1875 A, p. 386, pl. xiii, fig. 12.

Lesley, J. P. 1889 A, p. 734, figures.

Woodward, A. S. 1889 D, p. 60.

Subcarboniferous (Warsaw); Illinois.

Polyrhizodus ponticulus Newb. and Worth.

Newberry and Worthen 1866 A, p. 51, pl. iii, figs. 11, 11a.

Lesley, J. P. 1889 A, p. 734, figures.

Woodward, A. S. 1889 D, p. 60.

Subcarboniferous (Chester); Illinois.

Polyrhizodus porosus Newb. and Worth.

Newberry and Worthen 1866 A, p. 49, pl. iii, figs. 9, 9a.

Lesley, J. P. 1889 A, p. 734, figures.

Woodward, A. S. 1889 D, p. 60.

Subcarboniferous (Burlington); Illinois, Iowa.

Polyrhizodus princeps (Newb. and Worth.).

Newberry and Worthen 1866 A, p. 45, pl. iii, figs. 8-8b. (Dactylodus.)

Hambach, G. 1890 A, p. 80.

Jaekel, O. 1899 A, p. 285. (Dactylodus.)

Newberry, J. S. 1897 A, p. 295, pl. xxiii, figs. 5, 5a, 6. (Dactylodus.)

Woodward, A. S. 1889 D, p. 60.

Subcarboniferous (St. Louis); Illinois, Missouri.

Polyrhizodus rectus (Newb.).

Newberry, J. S. 1897 A, p. 296, pl. xxiii, figs. 8, 9. (Dactylodus.)

Subcarboniferous (St. Louis); Illinois.

Polyrhizodus truncatus Newb. and Worth.

Newberry and Worthen 1870 A, p. 357, pl. iii, figs. 16, 16a.

Woodward, A. S. 1889 D, p. 60.

Subcarboniferous (Burlington); Illinois.

Polyrhizodus williamsi St. J. and Worth.

St. John and Worthen 1875 A, p. 384, pl. xA, fig. 23; pl. xiii, fig. 11.

Keyes, C. R. 1894 A, p. 232.

Lesley, J. P. 1889 A, p. 734, figures.

Woodward, A. S. 1889 A, p. 60.

Subcarboniferous (Keokuk); Missouri, Io

PSAMMODONTIDÆ.

Koninck, L. G. de 1878 A, pp. 29, 35.

Davis, J. W. 1883 A, pp. 431, 459.

Jaekel, O. 1895 B.

1898 A, p. 49 (with subfams. Psammondontinæ, Helodontinæ, and Psephodontinæ).

Nicholson and Lydekker 1889 A, p. 934.

St. John and Worthen 1883 A, p. 197.

Woodward, A. S. 1889 D, p. 91.

1898 B, p. 50.

Zittel, K. A. 1890 A, p. 95.

PSAMMODUS Agassiz. Type *P. rugosus* Agassiz.

Agassiz, L. 1843 B (1838), iii, p. 103.

1844 A.

Davis, J. W. 1883 A, p. 459.

Günther, A. 1872 A, p. 519.

Koninck, L. G. de 1844 A, p. 615.

1878 A, p. 41.

McCoy, F. 1855 A, p. 643.

Miller, S. A. 1889 A, p. 608.

Newberry and Worthen 1866 A, p. 107.

Nicholson and Lydekker 1889 A, p. 935.

Owen, R. 1845 B, p. 59, pls. xvii, xx, xxi.

Pictet, F. J. 1854 A, p. 266.

Quenstedt, F. A. 1885 A, p. 293.

St. John and Worthen 1883 A, p. 197.

Steinmann and Döderlein 1890 A, p. 549.

Trautschold, H. 1874 B, p. 288.

Woodward, A. S. 1889 D, p. 99.

Zittel, K. A. 1890 A, p. 95.

Psammodus angularis Newb. and Worth.

Newberry and Worthen 1866 A, p. 107, pl. xi, figs. 2-2b.

Lesley, J. P. 1889 A, p. 784, figures (P. angularis); p. 787, figures (P. porosus?).

Miller, S. A. 1889 A, p. 609, fig. 1164. (P. porosus.)

Newberry and Worthen, 1866 A, p. 107, pl. xi, figs. 1-1b. ("P. porosus Ag.?).")

St. John and Worthen, 1883 A, p. 222.

Woodward, A. S. 1889 D, p. 107.

Subcarboniferous (Chester); Illinois.

Psammodus antiquus Newb.

Newberry, J. S. 1857 C, p. 124.

1873 A, p. 265.

Woodward, A. S. 1889 D, p. 459.

Devonian (Corniferous); Ohio.

Psammodus cælatatus St. J. and Worth.

St. John and Worthen 1883 A, p. 217, pl. xviii, fig. 1.

Hambach, G. 1890 A, p. 81.

Lesley, J. P. 1889 A, p. 784, figures.

Woodward, A. S. 1889 D, p. 107.

Subcarboniferous (St. Louis); Iowa, Missouri (*fide* Hambach).

Psammodus crassidens St. J. and Worth.

St. John and Worthen, 1883 A, p. 218, pl. xviii, figs. 2-6; text figs. a-c.

Lesley, J. P. 1889 A, p. 784, figures (P. crassidens) p. 788, figures (P. rugosus).

1895 A, pl. cccxxxi.

Miller, S. A. 1889 A, p. 608, fig. 1163.

Newberry and Worthen 1866 A, p. 108, pl. xi, figs. 3, 3a. (P. rugosus, not of Agassiz.)

Woodward, A. S. 1889 D, p. 107.

Subcarboniferous (St. Louis); Illinois, Iowa.

Psammodus glyptus St. J. and Worth.

St. John and Worthen 1883 A, p. 209, pl. xiv, figs. 5, 6.

Kindle, E. M. 1898 A, p. 485.

Lesley, J. P. 1889 A, p. 786, figures.

1895 A, pl. cccxxxi.

Newberry, J. S. 1889 A, p. 210, pl. xix, figs. 7, 8.

Woodward, A. S. 1889 D, p. 107.

Subcarboniferous (Burlington); Illinois.

Psammodus grandis St. J. and Worth.

St. John and Worthen 1883 A, p. 211, pl. xv, figs. 1-3.

Lesley, J. P. 1889 A, p. 786, figures.

1895 A, pl. cccxxxi.

Woodward, A. S. 1889 D, p. 107.

Subcarboniferous (Keokuk); Iowa.

Psammodus lovianus St. J. and Worth.

St. John and Worthen 1883 A, p. 207, pl. xiv, figs. 7-9.

Lesley, J. P. 1889 A, p. 786, figures.

1895 A, pl. cccxxxi.

Woodward, A. S. 1889 D, p. 108.

Subcarboniferous (Burlington); Illinois, Iowa.

Psammodus plenus St. J. and Worth.

St. John and Worthen 1883 A, p. 213, pl. xvi, figs. 1-4; pl. xvii, figs. 1-4.

Keyes, C. R. 1894 A, p. 235.

Lesley, J. P. 1889 A, p. 786, figures.

1895 A, pl. cccxxii.

Woodward, A. S. 1889 D, p. 108.

Subcarboniferous (St. Louis); Missouri, Illinois, Michigan.

Psammodus reticulatus Newb. and Worth.

Newberry and Worthen 1866 A, p. 109, pl. xi, figs. 5, 5a.

Hambach, G. 1890 A, p. 81.

Koninck, L. G. de 1878 A, p. 42. (P. porosus?).

Lesley, J. P. 1889 A, p. 788, figure.

1895 A, pl. cccxxxi.

St. John and Worthen 1883 A, p. 224, pl. xix, figs. 3, 5.

Woodward, A. S. 1889 D, p. 108.

Subcarboniferous (Chester); Illinois, Missouri (*fide* Hambach).

Psammodus springeri St. J. and Worth.

St. John and Worthen 1883 A, p. 202, pl. xx, figs. 4-11, and 7 text figures.

Lesley, J. P. 1889 A, p. 789, figures.

1895 A, pl. cccxxii.

Miller, S. A. 1889 A, p. 609, figs. 1165, 1166.

Woodward, A. S. 1889 D, p. 108.

Subcarboniferous (Burlington); Iowa, Illinois.

Psammodus tumidus St. J. and Worth.

St. John and Worthen 1883 A, p. 205, pl. xiv, figs. 1-4.

Lesley, J. P. 1889 A, p. 790, figures.

Woodward, A. S. 1889 D, p. 108.

Subcarboniferous (Burlington); Illinois, Iowa.

Psammodus turgidus St. J. and Worth.

St. John and Worthen 1883 A, p. 206, pl. xv, fig. 4; text-fig. a.

Lesley, J. P. 1889 A, p. 790, figures.

1895 A, pl. cccxxii.

Miller, S. A. 1889 A, p. 609, fig. 1168.

Woodward, A. S. 1889 D, p. 108.

Subcarboniferous (division beds of Burlington and Keokuk); Iowa.

Psammodus sp?

Dawson, J. W. 1868 A, p. 210, fig. 54.

Lesley, J. P. 1889 A, p. 790, figure.

Coal-measures; Nova Scotia.

MAZODUS Newb. Type *M. kepleri* Newb.

Newberry, J. S. 1889 A, p. 178.

Claypole, E. W. 1896 D, p. 146.

1896 E, p. 152.

Miller, S. A. 1892 A, p. 716.

Mazodus kepleri Newb.

Newberry, J. S. 1889 A, p. 180, pl. xxi, figs. 1-3.

Claypole, E. W. 1896 D, p. 146, figs. 1, 2.

Subcarboniferous (Waverly); Ohio.

ARCHÆOBATIS Newb. Type *A. gigas* Newb.

Newberry, J. S. 1878 A, p. 190.

1879 A, p. 346.

1885 A.

Nicholson and Lydekker 1885 A.

Woodward, A. S. 1889 D, p. 108.

1890 A, p. 391.

Zittel, K. A. 1890 A, p. 96.

Archæobatis gigas Newb.

Newberry, J. S. 1878 A, p. 190.

Kindle, E. M. 1898 A, p. 484.

Newberry, J. S. 1879 A, p. 347.

1884 A.

1885 A.

Woodward, A. S. 1889 D, p. 108.

1890 A, p. 391.

Subcarboniferous (St. Louis); Indiana.

COPODUS Davis. Type *C. cornutus* Davis.

Davis, J. W. 1883 A, p. 464.

1883 A, p. 469. (Labodus.)

Eastman, C. R. 1898 A, p. 112.

Miller, S. A. 1889 A, p. 592.

1892 A, p. 716.

Newberry, J. S. 1889 A, p. 198. (Labodus.)

Nicholson and Lydekker 1889 A, p. 935.

St. John and Worthen 1883 A, p. 227; 6 text-figs.

Woodward, A. S. 1884 A, p. 271.

1889 D, p. 91.

Woodward and Sherborn 1890 A, p. 43.

Zittel, K. A. 1890 A, p. 96.

Copodus marginatus (Newb.).

Newberry, J. S. 1889 A, p. 198, pl. xix, fig. 9. (Labodus.)

Kindle, E. M. 1898 A, p. 484. (Labodus.)

Subcarboniferous (St. Louis); Indiana.

Copodus pusillus St. J. and Worth.

St. John and Worthen 1883 A, p. 231, pl. xx, fig. 1.

Woodward, A. S. 1889 D, p. 99.

Subcarboniferous (Chester); Illinois.

Copodus vanhornii St. J. and Worth.

St. John and Worthen 1883 A, p. 229, pl. xx, figs. 2, 3.

Keyes, C. R. 1894 A, p. 235.

Woodward, A. S. 1889 D, p. 99.

Subcarboniferous (St. Louis); Missouri, Illinois.

Superfamily HETERODONTOIDEA,¹ *nom. nov.*

Gill, T., 1882, in Jordan and Gilbert's Synop. Fishes

N. A., p. 967. (Proarthri.)

1884 B, p. 346. (Proarthri.)

1884 C. (Proarthri.)

1893 A, p. 129. (Prosarthri.)

Jordan and Evermann 1896 A, p. 19. (Proarthri.)

Woodward, A. S. 1889 D, p. ix. ("Proarthri.")

¹ This name is proposed in order to conform to the rule adopted by many zoologists, according to which the name of the superfamily is derived from that of a typical family.

COCHLIODONTIDÆ.

Owen, R. 1867 A.

Brown, C. 1900 A, pp. 173, 174.

Cope, E. D. 1891 N, p. 17.
1898 B, p. 26.

Davis J. W. 1882 B.

1883 A, pp. 331, 410.

1890 B.

Koninck, L. G. de 1878 A, p. 29.

Nicholson and Lydekker 1889 A, p. 939.

St. John and Worthen 1883 A, p. 201.

Traquair, R. H. 1888 A, p. 84.

Woodward, A. S. 1884 A, p. 269.

1889 D, p. 169.

1892 G.

Zittel, K. A. 1890 A, p. 68.

HELODUS Agassiz. Type *H. simplex* Agassiz.

Agassiz, L. 1843 B (1838), iii, p. 104.

1844 A.

Amer. Geologist 1888 A.

Davis, J. W. 1890 B.

Jaekel O. 1898 A, p. 50.

Koninck, L. G. de 1844 A, p. 614.

1878 A, p. 38.

McCoy, F. 1885, A, p. 630.

Miller, S. A. 1889 A, p. 599.

Newberry and Worthen 1866 A, p. 74.

1870 A, p. 365.

Nicholson and Lydekker 1889 A, p. 939.

Pictet, F. J. 1854 A, p. 266.

Quenstedt, F. A. 1885 A, p. 294.

St. John and Worthen 1875 A, p. 295.

Traquair, R. H. 1888 A, p. 84.

Trautschold, H. 1874 B, p. 288.

Ward, J. 1890 A, p. 143.

Woodward, A. S. 1884 A, p. 269.

1889 D, pp. 171, 226.

Woodward and Sherborn 1890 A, p. 92.

Zittel, K. A. 1890 A, p. 75.

Hambach, G. 1890 A, p. 81.

Woodward A. S. 1889 D, p. 226.

Subcarboniferous (Keokuk); Illinois, Mis-
souri.

Helodus crenulatus Newb. and Worth.

Newberry and Worthen 1866 A, p. 82, pl. v, figs. 7, 7a.

Hambach, G. 1890 A, p. 81.

Woodward, A. S. 1889 D, p. 226.

Subcarboniferous (Keokuk); Illinois, Mis-
souri (*vide* Hambach).

Helodus dens-humani Newb. and
Worth.

Newberry and Worthen 1866 A, p. 76, pl. iv, figs.
21-21b.

Woodward, A. S. 1889 D, p. 226.

Subcarboniferous (Keokuk); Illinois.

Helodus denticulatus Newb. and
Worth.

Newberry and Worthen 1866 A, p. 81, pl. v, figs. 6-6b.

St. John and Worthen 1875 A, p. 317. (*Helodus?*)

Woodward, A. S. 1889 D, p. 226.

Subcarboniferous (Keokuk); Illinois.

Helodus elytra Newb. and Worth.

Newberry and Worthen 1866 A, p. 78, pl. iv, fig. 23.

St. John and Worthen 1875 A, p. 299. (*Choma-*
todus.)

1883 A, p. 95. (*Helodus.*)

Subcarboniferous (Keokuk); Illinois.

Helodus gibberulus Agassiz.

Agassiz, L. 1843 B (1838), iii, p. 106, pl. xii, figs. 1, 2.

Davis, J. W. 1883 A, p. 405, pl. li, fig. 19. (*Lopho-*
odus.)

Newberry, J. S. 1889 A, p. 102.

Trautschold, H. 1874 A, p. 269, pl. xxvi, fig. 9.

Woodward, A. S. 1889 D, p. 219.

Carboniferous; Europe: Subcarboniferous
(Waverly); Pennsylvania: ("Mountain lime-
stone"); Illinois, Indiana.

Helodus gibbus Leidy.

Leidy, J. 1857 H, p. 88, pl. v, fig. 18.

Woodward, A. S. 1889 D, p. 226.

Subcarboniferous (Warsaw); Illinois.

Helodus lævis Newb.

Newberry, J. S. 1879 A, p. 343.

Kindle, E. M. 1898 A, p. 484.

Woodward, A. S. 1889 D, p. 226.

Subcarboniferous (St. Louis); Indiana.

Helodus angulatus Newb. and Worth.

Newberry and Worthen 1866 A, p. 83, pl. v, figs.
9-15.

St. John and Worthen 1875 A, p. 362.

Woodward, A. S. 1889 D, p. 221.

Subcarboniferous (Burlington); Illinois.

Helodus biformis Newb. and Worth.

Newberry and Worthen 1866 A, p. 77, pl. iv, fig. 22.

St. John and Worthen 1875 A, p. 419.

Woodward, A. S. 1889 D, p. 226.

Subcarboniferous (Kinderhook); Iowa.

Helodus carbonarius Newb. and
Worth.

Newberry and Worthen 1866 A, p. 75, pl. iv, figs. 20,
20a.

Woodward, A. S. 1889 D, p. 226.

Coal-measures; Illinois.

Helodus coniculus Newb. and Worth.

Newberry and Worthen 1866 A, p. 75, pl. iv, figs.
19, 19a.

Kindle, E. M. 1898 A, p. 484.

Newberry, J. S. 1879 A, p. 344.

Woodward, A. S. 1889 D, p. 226.

Subcarboniferous (Keokuk); Illinois: (St.
Louis); Indiana: (Burlington); Iowa.

Helodus consolidatus Newb. and
Worth.

Newberry and Worthen 1866 A, p. 87, pl. vi, figs.
1-2a.

Helodus limax Newb. and Worth.

Newberry and Worthen 1866 A, p. 80, pl. v, figs. 5-5b.

Woodward, A. S. 1889 D, p. 226.

Subcarboniferous (Burlington); Iowa.

Helodus politus Newb. and Worth.

Newberry and Worthen 1866 A, p. 79, pl. v, fig. 2.

Woodward, A. S. 1889 D, p. 227.

Subcarboniferous (Keokuk); Illinois.

Helodus rugosus Newb. and Worth.

Newberry and Worthen 1870 A, p. 359, pl. ii, figs. 10, 10a.

Woodward, A. S. 1889 D, p. 227.

Coal-measures; Illinois.

VENUSTODUS St. J. and Worth.

St. John and Worthen 1875 A, p. 344.

Miller, S. A. 1889 A, p. 613.

Woodward, A. S. 1889 D, pp. 218-225.

1889 F, p. 298.

Venustodus argutus St. J. and Worth.

St. John and Worthen 1875 A, p. 352, pl. ix, figs. 5, 6.

Lesley, J. P. 1890 A, p. 1250, figures.

Woodward, A. S. 1889 D, p. 228.

Subcarboniferous (Chester); Illinois.

Venustodus robustus St. J. and Worth.

St. John and Worthen 1875 A, p. 345, pl. ix, figs. 15-18.

Lesley, J. P. 1890 A, p. 1251, figures.

Miller, S. A. 1889 A, p. 614, fig. 1177.

Woodward, A. S. 1889 D, p. 228.

Subcarboniferous (Burlington); Iowa.

Venustodus tenuicristatus St. J. and Worth.

St. John and Worthen 1875 A, p. 348, pl. ix, figs. 19-24.

XENODUS S. A. Miller. Type *Goniodus hertzeri* Newb.

Miller, S. A. 1892 A, p. 718.

Hay, O. P. 1899 E, p. 784.

Newberry, J. S. 1889 A, p. 67. (*Goniodus*, not of Agassiz, 1838.)

PERIPLECTRODUS St. J. and Worth.

St. John and Worthen 1875 A, p. 324.

Miller, S. A. 1889, p. 605.

Woodward, A. S. 1889 D, p. 228.

Periplectrodus compressus St. J. and Worth.

St. John and Worthen 1875 A, p. 326, pl. viii, figs. 26-26c.

Lesley, J. P. 1889 A, p. 622, figures.

Woodward, A. S. 1889 D, p. 229.

Subcarboniferous (St. Louis); Illinois.

Periplectrodus expansus St. J. and Worth.**Helodus sulcatus** Newb. and Worth.

Newberry and Worthen 1866 A, p. 83, pl. v, figs. 16, 16a.

Woodward, A. S. 1889 D, p. 221.

Subcarboniferous (Keokuk); Illinois.

Helodus undulatus Newb. and Worth.

Newberry and Worthen 1866 A, p. 82, pl. v, figs. 8-8b.

Woodward, A. S. 1889 D, p. 227.

Subcarboniferous (Keokuk); Illinois.

Helodus wortheni Hay.

Hay, O. P. 1899 E, p. 784.

Newberry and Worthen 1870 A, p. 360, pl. iii, figs. 15, 15a. (*Helodus compressus*; not *H. compressus* Newberry and Worthen 1866 A, p. 78,

pl. v, fig. 1=Hybocladodus compressus.)

Subcarboniferous (Burlington); Illinois.

Type *Chomatodus venustus* Leidy.

Keyes, C. R. 1894 A, p. 230.

Lesley, J. P. 1890 A, p. 1251, figures.

Woodward, A. S. 1889 D, p. 229.

Subcarboniferous (Keokuk); Illinois, Iowa, Missouri.

Venustodus variabilis St. J. and Worth.

St. John and Worthen 1875 A, p. 346, pl. ix, figs. 7-14.

Lesley, J. P. 1890 A, p. 1252, figures.

Woodward, A. S. 1889 D, p. 229.

Subcarboniferous (Burlington); Illinois, Iowa.

Venustodus venustus (Leidy).

Leidy, J. 1857 H, p. 89, pl. v, figs. 19-21. (*Chomatodus*.)

Hambach, G. 1890 A, p. 81. (*V. leidyi*.)

Lesley, J. P. 1890 A, p. 1250, figures. (*V. leidyi*.)

Miller, S. A. 1889 A, pp. 590, 613, 614.

Newberry and Worthen 1866 A, p. 34.

St. John and Worthen 1875 A, pp. 345, 350, pl. ix, figs. 1-4. (*V. leidyi*.)

Woodward, A. S. 1889 D, p. 228. (*V. leidyi*.)

Subcarboniferous (St. Louis); Illinois, Missouri.

Xenodus hertzeri (Newb.).

Newberry, J. S. 1889 A, p. 69, pl. xxvii, figs. 11-15. (*Goniodus*.)

Miller, S. A. 1892 A, p. 718.

Devonian (Huron Shale); Ohio.

Type *P. warreni* St. J. and Worth.

St. John and Worthen 1875 A, p. 327, pl. viii, figs. 27-27c.

Lesley, J. P. 1889 A, p. 623, figures.

Woodward, A. S. 1889 D, p. 229.

Subcarboniferous (Chester); Illinois.

Periplectrodus warreni St. J. and Worth.

St. John and Worthen 1875 A, p. 325, pl. viii, figs. 25-25c.

Lesley, J. P. 1889 A, p. 624, figures.

Woodward, A. S. 1889 D, p. 229.

Subcarboniferous (Burlington); Iowa.

PSEPHODUS Morris and Roberts. Type *Cochliodus magnus* Portlock.

Morris and Roberts, 1862, Quart. Jour. Geol. Soc., xviii, p. 101.

Amer. Geologist 1888 A.

Davis, J. W. 1882 B, p. 54

1883 A, p. 438.

Jaekel, O. 1896 A, p. 50.

Koninck, L. G. de 1878 A, p. 59.

Miller, S. A. 1889 A, p. 610 (*Psephodus*); p. 612 (*Teniodus*, in part.)

Newberry and Worthen 1866 A, p. 92. (*Aspidodus*, type *A. convolutus*.)

Nicholson and Lydekker 1889 A, p. 939.

St. John and Worthen, 1883 A, pp. 59, 63; p. 73 (*Teniodus*).

Traquair, R. H. 1885 A.

1885 B.

1888 A, p. 84.

Woodward, A. S. 1884 A, p. 270.

1889 D, p. 176.

1892 G, p. 674.

Zittel, K. A. 1890 A, p. 72.

***Psephodus crenulatus* (Newb. and Worth.).**

Newberry and Worthen 1866 A, p. 93, pl. viii, figs. 3-11. (*Aspidodus*.)

Hambach, G. 1890 A, p. 80. (*Aspidodus*.)

Kindle, E. M. 1898 A, p. 484. (*Aspidodus*.)

Newberry, J. S. 1879 A, p. 341. (*Aspidodus*.)

Newberry and Worthen 1866 A, p. 94, pl. viii, figs. 12, 22a. (*Aspid. convolutus*.)

St. John and Worthen 1875 A, p. 419.

1883 A, pp. 63, 67, 69.

Woodward, A. S. 1889 D, p. 184.

Subcarboniferous (Chester); Illinois, Kentucky, Missouri, Indiana.

***Psephodus latus* St. J. and Worth.**

St. John and Worthen 1883 A, p. 72, pl. ii, figs. 1-3.

Keyes, C. R. 1894 A, p. 232.

Lesley, J. P. 1889 A, p. 791, figures.

Woodward, A. S. 1889 D, p. 184.

Subcarboniferous (St. Louis); Illinois, Missouri.

***Psephodus lunulatus* St. J. and Worth.**

St. John and Worthen 1883 A, p. 74, pl. ii, fig. 4. (*P. cunulatus, errore*.)

Lesley, J. P. 1889 A, p. 791, figures.

Woodward, A. S. 1889 D, p. 185.

Subcarboniferous (Chester); Illinois.

SANDALODUS Newb. and Worth. Type, none specified.

Newberry and Worthen 1866 A, p. 102.

Davis, J. W. 1883 A, p. 436.

Koninck, L. G. de 1878 A, p. 62.

Miller, S. A. 1889 A, p. 612.

Newberry and Worthen 1866 A, p. 111. (*Trigonodus*, type *T. major*.)

Nicholson and Lydekker 1889 A, p. 939.

St. John and Worthen 1883 A, p. 184.

Woodward, A. S. 1889 D, p. 185.

***Psephodus obliquus* St. J. and Worth.**

St. John and Worthen 1883 A, p. 66, pl. i, figs. 1-5

Lesley, J. P. 1889 A, p. 791, figures.

1895 A, pl. ccxxxii.

Woodward, A. S. 1889 D, p. 184.

Subcarboniferous (Kinderhook); Iowa.

***Psephodus placenta* (Newb. and Worth.).**

Newberry and Worthen 1866 A, p. 80, pl. v, figs. 4, 4a. (*Helodus*.)

Lesley, J. P. 1889 A, p. 792, figures.

1895 A, pl. ccxxxii.

St. John and Worthen 1883 A, p. 69, pl. ii, figs. 5-8.

Woodward, A. S. 1889 D, p. 184.

Subcarboniferous (Kinderhook); Iowa.

***Psephodus politus* Newb.**

Newberry, J. S. 1897 A, p. 301, pl. xxiv, figs. 13-23.

[*P.* (*Helodus*); not *H. politus* of Newb. and Worth.]

Subcarboniferous (Burlington); Illinois.

***Psephodus regularis* (St. J. and Worth.).**

St. John and Worthen 1883 A, p. 77, pl. xiii, fig. 11. (*Teniodus*.)

Kindle, E. M. 1898 A, p. 485. (*Teniodus*.)

Lesley, J. P. 1890 A, p. 1173, figs. (*Teniodus*.)

1895 A, pl. ccxxxiv. (*Teniodus*.)

Woodward, A. S. 1889 D, p. 185.

Subcarboniferous (Warsaw); Indiana.

***Psephodus? reticulatus* St. J. and Worth.**

St. John and Worthen 1875 A, p. 417, pl. vi, figs. 19-24.

Lesley, J. P. 1889 A, p. 793, figures.

1895 A, pl. ccxxxii.

Woodward, A. S. 1889 D, p. 185.

Subcarboniferous (Kinderhook); Iowa.

***Psephodus? symmetricus* St. J. and Worth.**

St. John and Worthen 1883 A, p. 71, pl. i, figs. 6-7d.

Lesley, J. P. 1889 A, p. 793, figures.

1895 A, pl. ccxxxii.

Woodward, A. S. 1889 D, p. 185.

Subcarboniferous (Kinderhook); Iowa.

Zittel, K. A. 1890 A, p. 72.

***Sandalodus angustus* Newb. and Worth.**

Newberry and Worthen 1866 A, p. 103, pl. x, fig. 3.

Lesley, J. P. 1890 A, p. 920, figure.

1895 A, pl. ccxxxii.

Woodward, A. S. 1889 D, p. 187.

Subcarboniferous (Keokuk); Illinois.

Sandalodus crassus (Newb. and Worth.).

Newberry and Worthen 1866 A, p. 91, pl. viii, figs. 2, 2a. (Cochliodus? crassus, not Sandalodus crassus Newb. and Worth. 1870 = S. spatulatus Newb. and Worth.)

Keyes, C. R. 1894 A, p. 234. (S. lævissimus, S. crassus.)

Lesley, J. P. 1889 A, p. 789, figure. (Psammodus semicylindricus.)

1890 A, p. 921, figure. (S. grandis, S. lævissimus.)

1895 A, pl. cccxxii (S. grandis); pl. cccxxiii (S. lævissimus).

Newberry, J. S. 1897 A, p. 298 (S. grandis.)

Newberry and Worthen 1866 A, p. 105, pl. x, fig. 9 (Sandalodus grandis); p. 109, pl. xi, figs. 4, 4a (Psammodus? semicylindricus); p. 110, pl. xi, figs. 6, 6a (P? rhomboideus),

St. John and Worthen 1883 A, p. 186, pl. xii, figs. 8, 9. (S. lævissimus.)

Woodward, A. S. 1889 D, p. 188. (S. lævissimus.) Subcarboniferous; Illinois, Iowa, Missouri, Indiana.?

Sandalodus ellipticus Newb.

Newberry, J. S. 1897 A, p. 299, pl. xxiv, fig. 2. Subcarboniferous (Kinderhook); Iowa.

Sandalodus? minor (Newb. and Worth.).

Newberry and Worthen 1866 A, p. 112, pl. xi, figs. 7, 7a. (Trigonodus.)

Kindle, E. M. 1898 A, p. 485.

Lesley, J. P. 1890 A, p. 1219, figures. (Trigonodus.)

Newberry, J. S. 1879 A, p. 341. (Trigonodus.)

ORTHOPLEURODUS St. J. and Worth. Type *Sandalodus carbonarius* Newb. and Worth. = *O. angularis* (Newb. and Worth.).

St. John and Worthen 1883 A, pp. 59, 191.

Miller, S. A. 1889 A, p. 604.

Woodward, A. S. 1889 D, p. 188. (Syn. of Sandalodus.)

Zittel, K. A. 1890 A, p. 72.

Orthopleurodus angularis (Newb. and Worth.).

Newberry and Worthen 1866 A, p. 97, pl. ix, fig. 1. (Deltodus.)

Keyes, C. R. 1894 A, p. 234. (O. carbonarius.)

Kindle, E. M. 1898 A, p. 485. (O. carbonarius.)

Lesley, J. P. 1889 A, p. 568, figures. (O. carbonarius.)

Lesley, J. P. 1890 A, p. 920, figures. (Sandalodus carbonarius.)

1895 A, pl. dlxxi. (O. carbonarius.)

Newberry, J. S. 1889 A, p. 200, pl. xix, fig. 17. (O. carbonarius.)

Newberry and Worthen 1866 A, p. 104, pl. x, figs. 4, 5. (Sandalodus carbonarius.)

St. John, O. 1870 A, p. 436 (Xystrodus? occidentalis); p. 437 (Deltodus? angularis).

Woodward, A. S. 1889 D, p. 185. (Psephodus?).

Subcarboniferous (Keokuk); Illinois, (St. Louis,) Indiana.

Sandalodus parvulus Newb. and Worth.

Newberry and Worthen 1866 A, p. 102, pl. x, fig. 1. Keyes, C. R. 1894 A, p. 233.

Lesley, J. P. 1890 A, p. 921, figures.

St. John and Worthen 1883 A, p. 107, pl. iv, figs. 4-8. (Stenopterodus.)

Woodward, A. S. 1889 D, pp. 190, 217.

Subcarboniferous (St. Louis); Illinois, Missouri.

Sandalodus rhomboideus (Newb. and Worth.).

Newberry and Worthen 1866 A, p. 100, pl. ix, fig. 8. (Deltodus.)

Keyes, C. R. 1894 A, p. 234. (S. spatulatus.)

Lesley, J. P. 1889 A, p. 789, figure. (Psammodus.) 1890 A, p. 922, figures. (S. spatulatus.)

Miller, S. A. 1889 A, p. 612, fig. 1175. (S. spatulatus.)

Newberry, J. S. 1889 A, p. 204, pl. xxi, figs. 6-8. (S. crassus.)

Newberry and Worthen 1866 A, p. 103, pl. x, fig. 2. (S. spatulatus.)

1870 A, p. 369, pl. iv, figs. 3, 3a. (S. crassus.)

St. John and Worthen 1883 A, p. 188, pl. xii, fig. 7. (S. spatulatus.)

Woodward, A. S. 1889 D, p. 190. (S. spatulatus.) Subcarboniferous (St. Louis), Illinois, Missouri.

Sandalodus sp?

St. John and Worthen 1883 A, p. 187, pl. xii, figs. 5, 6.

Subcarboniferous (Warsaw); Illinois.

St. John, O. 1872 A, p. 244, pl. iv, figs. 18a-18d (Xystrodus occidentalis.)

St. John and Worthen 1883 A, pp. 177, 192, pl. xiii, figs. 6, 8. (O. carbonarius.)

Woodward, A. S. 1889 D, p. 188. (O. carbonarius.) Coal-measures; Indiana, Illinois, Iowa, Missouri, Kansas, and Nebraska.

Orthopleurodus convexus St. J. and Worth.

St. John and Worthen 1883 A, p. 193, pl. xii, figs. 4, 5.

Lesley, J. P. 1889 A, p. 569, figures.

Woodward, A. S. 1889 D, p. 190. (Sandalodus.) Coal-measures; West Virginia.

Orthopleurodus novo-mexicanus St. J. and Worth.

St. John and Worthen 1883 A, p. 195, pl. xiii, figs. 1-3.

Lesley, J. P. 1889 A, p. 569, figures.

Woodward, A. S. 1889 D, p. 190 (Sandalodus.) Subcarboniferous; New Mexico.

PLATYODUS Newb. Type *P. lineatus* Newb.

Newberry, J. S. 1875 A, p. 58.

Miller, S. A. 1889 A, p. 606.

Woodward, A. S. 1889 D, p. 191.

Platyodus lineatus Newb,

Newberry, J. S. 1875 A, p. 58, pl. lix, figures 1, 2.

Lesley, J. P. 1889 A, p. 691, figure.

Miller, S. A. 1889 A, p. 607, figure 1159.

Subcarboniferous (Waverly); Kentucky.

VATICINODUS St. J. and Worth. Type *V. vetustus* St. J. and Worth.

St. John and Worthen 1883 A, pp. 59, 80.

Miller, S. A. 1889 A, p. 613.

Woodward, A. S. 1889 D, pp. 186, 190.

Zittel, K. A. 1890 A, p. 69.

Vaticinodus? carbonarius St. J. and Worth.

St. John and Worthen 1883 A, p. 88, pl. iv, fig. 20.

Lesley, J. P. 1890 A, p. 1247, figure.

Woodward, A. S. 1889 D, p. 190.

Lower Coal-measures; Illinois.

Vaticinodus discrepans St. J. and Worth.

St. John and Worthen 1883 A, p. 83, pl. iii, figs. 2, 3.

Lesley, J. P. 1890 A, p. 1247, figure.

Woodward, A. S. 1889 D, p. 190.

Subcarboniferous (Burlington); Iowa.

Vaticinodus? lepis St. J. and Worth.

St. John and Worthen 1883 A, p. 88, pl. iv, fig. 21.

Lesley, J. P. 1890 A, p. 1249, figure.

Woodward, A. S. 1889 D, p. 191.

Upper Coal-measures; Illinois.

Vaticinodus? similis St. J. and Worth.

St. John and Worthen 1883 A, p. 86, pl. iv, figs. 17-19.

Lesley, J. P. 1890 A, p. 1249, figures.

Woodward, A. S. 1889 D, p. 191.

Subcarboniferous (Chester); Illinois.

Vaticinodus? simplex St. J. and Worth.

St. John and Worthen 1883 A, p. 84, pl. iv, figs. 22-26.

Keyes, C. R. 1894 A, p. 233.

Lesley, J. P. 1890 A, p. 1250, figures.

Woodward, A. S. 1889 D, p. 191.

Subcarboniferous (St. Louis); Illinois, Missouri, Iowa.

Vaticinodus vetustus St. J. and Worth.

St. John and Worthen, 1883 A, p. 82, pl. iii, fig. 1.

Lesley, J. P. 1890 A, p. 1250.

Newberry, J. S. 1897 A, p. 300.

Woodward, A. S. 1889 D, pp. 186, 190. (Sandolodus.)

Subcarboniferous (Kinderhook); Iowa.

PLATYXYSTRODUS Hay. Type *Cochiliodus striatus* McCoy.

Hay, O. P. 1899 E, p. 785.

Davis, J. W. 1886 A, p. 153. (Xystrodus; not of Plieninger, 1860.)

Miller, S. A. 1889 A, p. 614. (Xystrodus.)

Morris and Roberts, 1862, Quart. Jour. Geol. Soc., xviii, p. 101. (Xystrodus, type *Cochiliodus striatus* McCoy.)

St. John and Worthen 1883 A, pp. 59, 175. (Xystrodus.)

Woodward, A. S. 1889 D, p. 192. (Xystrodus.)

Zittel, K. A. 1890 A, p. 72. (Xystrodus.)

Platyxystrodus bellulus (St. J. and Worth.).

St. John and Worthen 1883 A, p. 183, pl. viii, fig. 3. (Xystrodus.)

Hay, O. P. 1899 E, p. 785.

Lesley, J. P. 1890 A, p. 1264, figs. (Xystrodus.)

Woodward, A. S. 1889 D, p. 195. (Xystrodus.)

Lower Coal-measures; Illinois.

Platyxystrodus imitatus (St. J. and Worth.).

St. John and Worthen 1883 A, p. 180, pl. viii, fig. 2. (Xystrodus.)

Hay, O. P. 1899 E, p. 785.

Keyes, C. R. 1894 A, p. 233. (Xystrodus.)

Lesley, J. P.; 1890 A, p. 1264, figure. (Xystrodus.)

Woodward, A. S. 1889 D, p. 195. (Xystrodus.)

Subcarboniferous (St. Louis); Illinois, Iowa, Missouri.

Platyxystrodus inconditus (St. J. and Worth.).

St. John and Worthen 1883 A, p. 179, pl. viii, fig. 1. (Xystrodus.)

Hay, O. P. 1899 A, p. 785.

Lesley, J. P. 1890 A, p. 1264, figure. (Xystrodus.)

Woodward, A. S. 1889 D, p. 195. (Xystrodus.)

Subcarboniferous (Keokuk); Illinois, Iowa.

Platyxystrodus simplex (St. J. and Worth.).

St. John and Worthen 1883 A, p. 178, pl. viii, figs. 4, 5. (Xystrodus.)

Davis, J. W. 1886 A, p. 153. (Xystrodus.)

Hay, O. P. 1899 E, p. 785.

Lesley, J. P. 1890 A, p. 1265, figure. (Xystrodus.)

Woodward, A. S. 1889 D, p. 195. (Xystrodus.)

Subcarboniferous (Burlington); Illinois, Iowa.

Platyxystrodus verus (St. J. and Worth.).

St. John and Worthen 1883 A, p. 181, pl. viii, figs. 6, 7. (Xystrodus.)

Hay, O. P. 1899 E, p. 785.

Lesley, J. P. 1890 A, p. 1265, figure. (Xystrodus.)

Woodward, A. S. 1889 D, p. 194. (Xystrodus.)

Subcarboniferous (Chester); Illinois.

ICANODUS S. A. Miller. Type *Tomodus convexus* St. J. and Worth.

Miller, S. A. 1892 A, p. 716.

Davis, J. W. 1883 A, p. 446. (*Tomodus*, preoccupied by Trautschold, 1879.)

1886 A, p. 153. (*Tomodus*.)

Hay, O. P. 1899 E, p. 785.

Miller, S. A. 1889 A, p. 613. (*Tomodus*.)

St. John and Worthen 1883 A, pp. 59, 171. (*Tomodus*.)

Woodward, A. S. 1889 D, p. 191. (*Tomodus*.)

Zittel, K. A. 1890 A, p. 72. (*Tomodus*.)

Icanodus limitaris (St. J. and Worth).

St. John and Worthen 1883 A, p. 173, pl. xiii, fig.

12. (*Tomodus*; called on explanation of plate "Teniodus regularis.")

Hay, O. P. 1899 E, p. 785.

Miller, S. A. 1892 A, p. 716.

Woodward, A. S. 1889 D, p. 192. (*Tomodus*.)

Subcarboniferous (Burlington); Iowa.

STENOPTERODUS St. J. and Worth. Type, none specified; *S. planus* St. J. and Worth. may be taken.

St. John and Worthen 1883 A, pp. 59, 101.

Miller, S. A. 1889 A, p. 612.

Woodward, A. S. 1889 D, p. 217.

Stenopterodus elongatus St. J. and Worth.

St. John and Worthen 1883 A, p. 106, pl. iv, figs. 1-3.

Woodward, A. S. 1889 D, p. 217.

Subcarboniferous (Warsaw); Illinois.

Stenopterodus planus St. J. and Worth.

St. John and Worthen 1883 A, p. 102, pl. iv, figs. 9-14.

Woodward, A. S. 1889 D, p. 217.

Subcarboniferous (Burlington); Illinois, Iowa.

Stenopterodus spindel.

St. John and Worthen 1883 A, p. 105, pl. iv, figs. 15, 16.

Subcarboniferous (Keokuk); Illinois.

DELTODOPSIS St. J. and Worth. Type *D. angustus* (Newb. and Worth.).

St. John and Worthen 1883 A, p. 158.

Miller, S. A. 1889 A, p. 595.

Newberry, J. S. 1889 A, p. 186.

Woodward, A. S. 1889 D, p. 217.

Zittel, K. A. 1890 A, p. 72.

Deltodopsis affinis St. J. and Worth.

St. John and Worthen 1883 A, p. 160, pl. xi, fig. 1.

Woodward, A. S. 1889 D, p. 217.

Subcarboniferous (Warsaw); Illinois.

Deltodopsis angustus (Newb. and Worth.).

Newberry and Worthen 1870 A, p. 368, pl. iii, fig. 7. (*Deltodus*.)

St. John and Worthen 1883 A, p. 163, pl. xi, figs. 7-10.

Woodward, A. S. 1889 D, pp. 200, 218. (*Deltodus*.)

Subcarboniferous (Chester); Illinois.

Deltodopsis? bialveatus St. J. and Worth.

St. John and Worthen 1883 A, p. 169, pl. xi, figs. 15-18. (Including varieties *keokuk* and *convexus*.)

Woodward, A. S. 1889, D, p. 217.

Subcarboniferous (Burlington); Iowa; (St. Louis); Illinois.

Deltodopsis convolutus St. J. and Worth.

St. John and Worthen 1883 A, p. 165, pl. xi, figs. 11, 12.

Woodward, A. S. 1889 D, p. 217.

Subcarboniferous (Burlington); Iowa, Illinois.

Deltodopsis? exornatus St. J. and Worth.

St. John and Worthen 1883 A, p. 168, pl. xi, fig. 14.

Woodward, A. S. 1889 D, p. 218.

Subcarboniferous (Warsaw); Illinois.

Deltodopsis? inflexus St. J. and Worth.

St. John and Worthen 1883 A, p. 167, pl. xi, fig. 13.

Woodward, A. S. 1889 D, p. 218.

Subcarboniferous (Keokuk); Illinois.

Deltodopsis sancti-ludovici St. J. and Worth.

St. John and Worthen 1883 A, p. 161, pl. xi, figs. 2-6.

Keyes, C. R. 1894 A, p. 235.

Woodward, A. S. 1889 D, p. 218.

Subcarboniferous (St. Louis); Illinois, Iowa, Missouri.

DELTODUS Morris and Roberts. Type *Pecilodus sublaevis* (McCoy).

Morris and Roberts, 1862, Quart. Jour. Geol. Soc., xviii, p. 100. (Ex Agassiz MSS.)

Davis, J. W. 1883 A, p. 427.

Koninck, L. G. de 1878 A, p. 63.

Miller, S. A. 1889 A, p. 595 (*Deltodus*); p. 612 (*Tæniodus*).

Newberry, J. S. 1889 A, p. 186.

Newberry and Worthen 1866 A, p. 95.

St. John and Worthen 1883 A, pp. 60, 141 (*Deltodus*); pp. 59, 75 (*Tæniodus*).

Traquair, R. H. 1888 A, p. 84.

Trautschold, H. 1879 B, p. 54.

Woodward, A. S. 1884 A, p. 270.

1889 A, p. 195.

1892 G, fig. 6.

Woodward and Sherborn 1890 A, p. 60.

Zittel, K. A. 1890 A, p. 73.

Deltodus alatus Newb. and Worth.

Newberry and Worthen 1870 A, p. 368, pl. ii, fig. 6.

Woodward, A. S. 1889 D, p. 199.

Subcarboniferous (Keokuk); Illinois.

Deltodus cinctulus St. J. and Worth.

St. John and Worthen 1883 A, p. 146, pl. ix, figs. 6, 7.

Keyes, C. R. 1894 A, p. 235.

Kindle, E. M. 1898 A, p. 484.

Woodward, A. S. 1889 D, p. 200.

Subcarboniferous (Warsaw); Illinois, Missouri, Indiana.

Deltodus cinctus Newb.

Newberry, J. S. 1879 A, p. 344.

Woodward, A. S. 1889 D, p. 200.

Subcarboniferous (St. Louis); Iowa.

Deltodus cingulatus Newb. and Worth.

Newberry and Worthen 1866 A, p. 99, pl. ix, fig. 6.

Woodward, A. S. 1889 D, p. 200.

Subcarboniferous (Chester); Illinois.

Deltodus complanatus Newb. and Worth.

Newberry and Worthen 1866 A, p. 98, pl. ix, fig. 4.

Koninck, L. G. de 1878 A, p. 64.

Lesley, J. P. 1890 A, p. 920, figure (Sandalodus); p. 1218, figures (Trigonodus major).

1895 A, pl. cccxxxiii. (Sandalodus.)

Newberry, J. S. 1897 A, p. 298, pl. xxiv, figs. 1-7.

Newberry and Worthen 1866 A, p. 112, pl. xi, 8-9a. (Trigonodus major.)

St. John and Worthen 1883 A, p. 184, pl. xii, figs. 1-4. (Sandalodus.)

Woodward, A. S. 1889 D, p. 189. (Sandalodus.)

Subcarboniferous (Burlington); Iowa.

Deltodus fasciatus Newb. and Worth.

Newberry and Worthen 1870 A, p. 366, pl. iii, fig. 17.

Lesley, J. P. 1890 A, p. 1172, figures. (Teniodus faciatius.)

1895 A, pl. cccxxxiv. (Teniodus faciatius.)

St. John and Worthen 1883 A, p. 76, pl. xiii, fig. 9. (Teniodus fasciatus?)

Woodward, A. S. 1889 D, p. 200.

Subcarboniferous (Keokuk); Illinois.

Deltodus grandis Newb.

Newberry, J. S. 1879 A, p. 344.

Kindle, E. M. 1898 A, p. 484 (D. grandis?).

Newberry, J. S. 1897 A, p. 297.

Newberry & Worthen 1866 A, p. 101, pl. ix, figs. 9, 9a.

Woodward, A. S., 1889 D, p. 188. (Syn. of Sandalodus laevissimus.)

Subcarboniferous (Keokuk); Illinois, Indiana.

Deltodus inornatus Newb.

Newberry, J. S. 1897 A, p. 298, pl. xxiii, figs. 10, 11.

Subcarboniferous (Kinderhook); Iowa.

Deltodus intermedius St. J. and Worth.

St. John and Worthen 1883 A, p. 153, pl. ix, figs. 14, 15.

Keyes, C. H. 1891 A, p. 265. (D. intermedius?)

Woodward, A. S. 1889 D, p. 200.

Subcarboniferous (St. Louis); Illinois, Iowa: "Coal-measures; Iowa.

Deltodus latior St. J. and Worth.

St. John and Worthen 1883 A, p. 145, pl. ix, figs. 11, 12.

Woodward, A. S. 1889 D, p. 200.

Subcarboniferous (Keokuk); Illinois, Iowa.

Deltodus littoni Newb. and Worth.

Newberry and Worthen 1870 A, p. 367, pl. iv, figs. 8, 8a.

Keyes, C. R. 1894 A, p. 235.

St. John and Worthen 1883 A, p. 149.

Woodward, A. S. 1889 D, p. 200.

Subcarboniferous; Missouri.

Deltodus mercurii Newb.

Newberry, J. S. 1876 A, p. 137, pl. iii, figs. 1, 1a.

St. John and Worthen 1883 A, pl. x, figs. 2-2d.

Woodward, A. S. 1889 D, p. 200.

Coal-measures; New Mexico.

Deltodus obliquus (St. J. and Worth.).

St. John and Worthen 1883 A, p. 78, pl. xiii, fig. 10. (Teniodus.)

Lesley, J. P. 1890 A, p. 1173, figures. (Teniodus.) 1895 A, pl. cccxxxiv. (Teniodus.)

Woodward, A. S. 1889 D, p. 201.

Subcarboniferous (Warsaw); Indiana.

Deltodus occidentalis (Leidy).

Leidy, J. 1857 N, p. 88, pl. v, figs. 3-16. (Cochliodus.)

Newberry and Worthen 1866 A, p. 97, pl. ix, figs. 2-3a. (D. stellatus.)

St. John and Worthen 1883 A, p. 150, pl. ix, figs. 9, 10. (D. occidentalis?)

Woodward, A. S. 1889 D, p. 199.

Subcarboniferous; Illinois.

Deltodus parvus St. J. and Worth.

St. John and Worthen 1883 A, p. 151, pl. ix, figs. 1-5.

Keyes, C. R. 1894 A, p. 235.

Woodward, A. S. 1889 D, p. 201.

Subcarboniferous (St. Louis); Illinois, Iowa, Missouri.

Deltodus planidens Cope.

Cope, E. D. 1894 F, p. 435, pl. xx, fig. 6.

Carboniferous?; Texas.

Deltodus powellii St. J. and Worth.

St. John and Worthen 1883 A, p. 155, pl. x, fig. 1-1f

Woodward, A. S. 1889 D, p. 201.

Carboniferous; Utah.

Deltodus propinquus St. J. and Worth.

St. John and Worthen 1883 A, p. 156, pl. x, figs. 3, 4.
 Woodward A. S. 1889 D, p. 201.
 1900 C, p. 420.
 Coal-measures; Illinois.

Deltodus spatulatus Newb. and Worth.

Newberry and Worthen 1866 A, p. 100, pl. ix, fig. 7.
 Kindle, E. M. 1898 A, p. 484.
Newberry, J. S. 1879 A, p. 346.
 1897 A, p. 299, pl. xxiv, figs. 8-11.
St. John and Worthen 1883 A, p. 166.

Woodward, A. S. 1889 D, p. 199.

Subcarboniferous; Illinois, Indiana.

Deltodus trilobus St. J. and Worth.

St. John and Worthen 1883 A, p. 148, pl. ix, fig. 8.
 Woodward, A. S. 1889 D, p. 201.
 Subcarboniferous (Warsaw); Illinois.

Deltodus undulatus Newb. and Worth.

Newberry and Worthen 1866 A, p. 98, pl. ix, fig. 5.
 Woodward, A. S. 1889 D, p. 201.
 Subcarboniferous (Keokuk); Iowa.

CHITINODUS St. J. and Worth. Type *C. springeri* St. J. and Worth.

St. John and Worthen 1883 A, pp. 60, 109.
 Miller, S. A. 1889 A, p. 590.
 Woodward, A. S. 1889 D, p. 217.
 Zittel, K. A. 1890 A, p. 70.

Chitinodus antiquus St. J. and Worth.

St. John and Worthen 1883 A, p. 116, pl. vi, fig. 2.
 Woodward, A. S. 1889 D, p. 217.
 Subcarboniferous (Burlington); Iowa.

Chitinodus latus (Leidy).

Leidy, J. 1857 H, p. 88, pl. v, fig. 17. (Cochliodus.)
Dana, J. D. 1896 A, p. 644, fig. 1018. (Cochliodus nobilis.)
Newberry, J. S. 1897 A, p. 301, pl. xxiv, fig. 24. (Helodus coxanus.)
Newberry and Worthen 1866 A, p. 88, pl. vi, figs. 3-6 [Helodus (Cochliodus) nobilis]; p. 89, pl. vii, figs. 1-4; pl. viii, fig. 1 (Cochliodus nobilis).
 1870 A, p. 365 (Cochliodus nobilis).
St. John and Worthen 1883 A, pp. 112, 124.
 Woodward, A. S. 1889 D, p. 208. (Cochliodus.)
 Zittel, K. A. 1890 A, p. 70. (Chitinodus nobilis.)
 Subcarboniferous (Keokuk); Illinois, Iowa.

Chitinodus liratus St. J. and Worth.

St. John and Worthen 1883 A, p. 119, pl. vi, fig. 1.
 Woodward, A. S. 1889 D, p. 217.
 Subcarboniferous (St. Louis); Illinois.

Chitinodus rugosus Newb. and Worth.

Newberry and Worthen 1866 A, p. 94, pl. viii, fig. 13. (Pæcilodus.)
 1866 A, p. 95, pl. viii, fig. 14. (Pæcilodus ornatus.)
St. John and Worthen 1883 A, p. 112. (P. rugosus and P. ornatus to C. rugosus.)
 Woodward, A. S. 1889 D, p. 201 (P. ornatus to Deltodus ornatus); p. 205 (P. rugosus); p. 217.
 Subcarboniferous (Keokuk); Illinois.

Chitinodus springeri St. J. and Worth.

St. John and Worthen 1883 A, p. 112, pl. vi, figs. 3-15.
 Woodward, A. S. 1889 D, p. 217.
 Subcarboniferous (Burlington); Illinois, Iowa.

Chitinodus tribulis St. J. and Worth.

St. John and Worthen 1883 A, p. 117, pl. vii, figs. 18-21.
 Woodward, A. S. 1889 D, p. 217.
 Subcarboniferous (Keokuk); Illinois, Iowa.

PÆCILODUS McCoy. Type *P. jonesii* McCoy.

McCoy, F. 1848 A, p. 129.
 Barkas, T. P. 1873 A, p. 19.
 Davis, J. W. 1883 A, pp. 413, 441.
 McCoy, F. 1855 A, p. 638.
 Miller, S. A. 1889 A, p. 607.
 Pictet, F. J. 1854 A, p. 270.
 Traquair, R. H. 1888 A, p. 84.
 Trautschold, H. 1874 B, p. 290.
 Woodward, A. S. 1889 D, p. 201.
 1892 G, p. 674.
 Zittel, K. A. 1890 A, p. 70.

Pæcilodus carbonarius St. J. and Worth.

St. John and Worthen 1883 A, p. 139, pl. viii, figs. 20-21.
 Lesley, J. P. 1889 A, p. 727, figures.
 Woodward, A. S. 1889 D, p. 204.
 Upper Coal-measures; Illinois, Kansas.

Pæcilodus cestriensis St. J. and Worth.

St. John and Worthen 1883 A, p. 135, pl. viii, figs. 15-17.

Lesley, J. P. 1889 A, p. 727, figures.
 Woodward, A. S. 1889 D, p. 205.
 Subcarboniferous (Chester); Illinois.

Pæcilodus convolutus Newb. and Worth.

Newberry and Worthen 1870 A, p. 366, pl. ii, fig. 9.
 Woodward, A. S. 1889 D, p. 205.
 Subcarboniferous (Keokuk); Illinois.

Pæcilodus sancti-ludovici St. J. and Worth.

St. John and Worthen 1883 A, p. 132, pl. viii, figs. 8-12.
 Keyes, C. R. 1894 A, p. 235.
 Lesley, J. P. 1889 A, p. 728, figures.
 Woodward, A. S. 1889 D, p. 205.
 Subcarboniferous (St. Louis); Illinois, Missouri, Iowa.

Pæcilodus springeri St. J. and Worth.

St. John and Worthen 1883 A, p. 138, pl. viii, fig. 19.
 Lesley, J. P. 1889 A, p. 728, figures.

Woodward, A. S. 1889 D, p. 205, 215. (*Deltoptychius*.)
Subcarboniferous; New Mexico.

***Pœcilodus varsoviensis* St. J. and Worth.**

St. John and Worthen 1883 A, p. 131, pl. viii, figs. 13, 14.

Lesley, J. P. 1889 A, p. 728, figures.

Woodward, A. S. 1889 D, p. 205.
Subcarboniferous (Warsaw); Illinois.

***Pœcilodus wortheni* St. John.**

St. John, in *St. John and Worthen* 1883 A, p. 136, pl. viii, fig. 18.

Lesley, J. P. 1889 A, p. 728, figures.

Woodward, A. S. 1889 D, pp. 205, 215. (*Deltoptychius*.)

Subcarboniferous (Chester); Illinois.

COCHLIODUS Agassiz. Type *C. contortus* Agassiz.

Agassiz, L. 1843 B (1838), iii, p. 113.

1844 A.

Amer. Geologist 1888 A, p. 133.

Davis, J. W. 1882 B, p. 54.

1883 A, p. 420.

Jaekel, O. 1891 B, p. 128.

Koninck, L. G. de 1878 A, p. 56.

McCoy, F. 1853 B.

1855 A, p. 621.

Miller, S. A. 1889 A, p. 591.

Newberry, J. S. 1889 A, p. 186.

Newberry and Worthen 1866 A, pp. 74, 89.

Nicholson and Lydekker 1889 A, p. 940.

Owen, R. 1845 B, p. 62, pl. xxii, fig. 1.

1860 E, p. 109.

1867 A.

Pictet, F. J. 1854 A, p. 267.

St. John and Worthen 1883 A, p. 58.

Steinmann and Döderlein 1890 A, p. 550.

Traquair, R. H. 1888 A, p. 84.

Trautschold H. 1874 B, p. 291.

Woodward, A. S. 1884 A, p. 269.

1889 D, p. 205.

1892 G, fig. 3.

Zittel, K. A. 1890 A, pp. 69, 71.

***Cochliodus costatus* Newb. and Worth.**

Newberry and Worthen 1870 A, p. 364, pl. iii, figs. 10-12, 12a.

St. John and Worthen 1883 A, pp. 167, 171.

Woodward, A. S. 1889 D, p. 208.

Subcarboniferous (Burlington); Iowa.

***Cochliodus leidyi* St. J. and Worth.**

St. John and Worthen 1883 A, p. 127, pl. vii, figs. 11-16.

Woodward, A. S. 1889 D, p. 208.

Subcarboniferous (Chester); Illinois.

***Cochliodus obliquus* St. J. and Worth.**

St. John and Worthen 1883 A, p. 126, pl. vii, fig. 17.

Keyes, C. R. 1894 A, p. 233.

Woodward, A. S. 1889 D, p. 212.

Subcarboniferous (St. Louis); Missouri.

***Cochliodus vanhornii* St. J. and Worth.**

St. John and Worthen 1883 A, p. 121, pl. vii, figs. 1-10.

Keyes, C. R. 1894 A, p. 233.

Woodward, A. S. 1889 D, p. 208.

Subcarboniferous (St. Louis); Illinois, Iowa, Missouri.

DELTOPTYCHIUS Davis. Type *Cochliodus acutus* McCoy.

Davis, J. W. 1883 A, p. 432.

Miller, S. A. 1889 A, p. 595.

St. John and Worthen 1883 A, pp. 59, 89.

Woodward, A. S. 1889 D, p. 212.

1892 G, p. 674.

Woodward and Sherborn 1890 A, p. 61.

Zittel, K. A. 1890 A, p. 70.

***Deltoptychius expansus* St. J. and Worth.**

St. John and Worthen 1883 A, p. 98, pl. v, figs. 9, 13.

Keyes, C. R. 1894 A, p. 233.

Woodward, A. S. 1889 D, p. 212, 215.

Subcarboniferous (St. Louis); Illinois, Missouri, Iowa.

***Deltoptychius nitidus* (Leidy).**

Leidy, J. 1857 A, p. 87, pl. v, fig. 2 (*Cochliodus*).

St. John and Worthen 1883 D, p. 99, pl. v, fig. 16.

Woodward, A. S. 1889 D, p. 215.

Subcarboniferous (Chester); Illinois.

***Deltoptychius primus* St. J. and Worth.**

St. John and Worthen 1883 A, p. 93, pl. v, figs. 6-8.

Woodward A. S. 1889 D, pp. 212, 215.

Subcarboniferous (Burlington); Iowa.

***Deltoptychius varsoviensis* St. J. and Worth.**

St. John and Worthen 1883 A, p. 96, pl. v, figs. 14, 15.

Woodward, A. S. 1889 D, pp. 212, 215.

Subcarboniferous (Warsaw); Illinois.

***Deltoptychius wachsmuthi* St. J. and Worth.**

St. John and Worthen 1883 A, p. 93, pl. v, figs. 1-5.

Keyes, C. R. 1894 A, p. 233.

Lesley, J. P. 1889 A, p. 193, figure.

1895 A, pl. cccxxix.

Miller, S. A. 1889 A, p. 595, fig. 1124.

Woodward, A. S. 1889 D, pp. 209, 212, 215.

Subcarboniferous (Keokuk); Illinois, Iowa, Missouri.

ORODONTIDÆ.

Davis, J. W. 1882 B.

1883 A, pp. 331, 386.

Koninck, L. G. de 1878 A, p. 29.

Traquair, R. H. 1888 A, p. 84.

Ward, J. 1890 A, p. 34.

Woodward, A. S. 1884 A, p. 269.

Zittel, K. A. 1890 A, p. 74. (Cestracionidæ, in part.)

ORODUS Agassiz. Type *O. cinctus* Agassiz.

Agassiz, L. 1843 B (1838), iii, p. 96.

1844 A.

Davis, J. W. 1882 B, p. 49.

1883 A, p. 390.

Eastman, C. R. 1900 C, p. 392.

Hasse, C. 1878 A, p. 145.

Jaekel, O. 1890 A, p. 93.

1899 A.

Koninck, L. G. de. 1844 A, p. 612.

1878 A, p. 29.

Miller, S. A. 1889 A, p. 603.

Newberry and Worthen 1866 A, p. 62.

Nicholson and Lydekker 1889 A, p. 940.

Owen, R. 1860 E, p. 108.

Pictet, F. J. 1854 A, p. 263.

Quenstedt, F. A. 1885 A, p. 294.

Trautschold, H. 1874 B, p. 292.

Woodward, A. S. 1884 A, p. 269.

1889 D, p. 230.

Woodward and Sherborn 1890 A, pp. 49, 132.

Zittel, K. A. 1890 A, p. 75.

Orodus alleni St. J. and Worth.

St. John and Worthen 1875 A, pp. 310, 318, pl. vii, fig. 19.

Woodward, A. S. 1889 D, p. 236.

Lower Coal-measures; Iowa.

Orodus carinatus St. J. and Worth.

St. John and Worthen 1875 A, p. 307, pl. v, figs. 24a-24d.

Woodward, A. S. 1889 D, p. 236.

Subcarboniferous (Keokuk); Iowa.

Orodus colletti Newb.

Newberry, J. S. 1879 A, p. 343.

Kindle, E. M. 1898 A, p. 484.

Woodward, A. S. 1889 D, p. 236.

Subcarboniferous (St. Louis); Indiana.

Orodus dædaleus St. J. and Worth.

St. John and Worthen 1875 A, p. 301, pl. vi, figs. 7, 8.

Woodward, A. S. 1889 D, p. 237.

Subcarboniferous (Kinderhook); Iowa.

Orodus decussatus St. J. and Worth.

St. John and Worthen 1875 A, p. 300, pl. vi, figs. 10-15.

Woodward, A. S. 1889 D, p. 237.

Subcarboniferous (Kinderhook); Iowa.

Orodus elegantulus Newb. and Worth.

Newberry and Worthen 1866 A, p. 64, pl. iv, figs. 6, 6a.

Kindle, E. M. 1898 A, p. 484.

Lesley, J. P. 1889 A, p. 505, figure.

Newberry, J. S. 1875 A, p. 51, pl. lviii, figs. 12, 12a.

1879 A, p. 346.

Woodward, A. S. 1889 D, p. 235.

Subcarboniferous; Iowa, Indiana, Ohio.

Orodus fastigiatus St. J. and Worth.

St. John and Worthen 1875 A, p. 306, pl. vi, figs. 1-3.

Woodward, A. S. 1889 D, p. 237.

Subcarboniferous (Burlington); Iowa.

Orodus gibbosus (Newb. and Worth.).

Newberry and Worthen 1866 A, p. 79, pl. v, figs.

3-3a. (Helodus.)

Miller, S. A. 1899 A, p. 599, fig. 1137. (Helodus.)

St. John and Worthen 1875 A, p. 305. (Orodus.)

Woodward, A. S. 1889 D, p. 238. (O. variocostatus?)

Subcarboniferous (Keokuk); Illinois, Iowa.

Orodus major St. J. and Worth.

St. John and Worthen 1875 A, p. 302, pl. vii, fig. 10.

Koninck, L. G. de 1878 A, p. 30. (Syn. of O. ramossus.)

Woodward, A. S. 1889 D, p. 237.

Subcarboniferous (Burlington); Iowa.

Orodus mammillaris Newb. and Worth.

Newberry and Worthen 1866 A, p. 66, pl. iv, figs. 10, 10a.

Dana, J. D. 1896 A, p. 644, fig. 1022.

Woodward, A. S. 1889 D, p. 235.

Subcarboniferous (Keokuk); Illinois.

Orodus minutus Newb. and Worth.

Newberry and Worthen 1866 A, p. 68, pl. iv, fig. 12.

Woodward, A. S. 1889 D, p. 237.

Subcarboniferous (Keokuk); Illinois.

Orodus neglectus St. J. and Worth.

St. John and Worthen 1875 A, p. 308, pl. vi, fig. 26.

Woodward, A. S. 1889 D, p. 237.

Subcarboniferous (St. Louis); Illinois, Iowa.

Orodus ornatus Newb. and Worth.

Newberry and Worthen 1866 A, p. 65, pl. iv, figs. 7-8a.

Kindle, E. M. 1898 A, p. 484.

Newberry, J. S. 1879 A, p. 346.

Woodward, A. S. 1889 D, p. 233.

Subcarboniferous (Keokuk); Illinois, Indiana.

Orodus ? parallellus St. J. and Worth.

St. John and Worthen 1875 A, p. 295, pl. v, fig. 23.

Woodward, A. S. 1889 D, p. 237.

Subcarboniferous (Kinderhook); Iowa.

Orodus parvulus St. J. and Worth.

St. John and Worthen 1875 A, p. 309, pl. vi, fig. 6.

Woodward, A. S. 1889 D, p. 237.

Subcarboniferous (St. Louis); Illinois.

Orodus plicatus Newb. and Worth.*Newberry and Worthen* 1866 A, p. 63, pl. iv, fig. 5.

Hambach, G. 1890 A, p. 81.

Woodward, A. S. 1889 D, p. 237.

Subcarboniferous (St. Louis); Missouri.

Orodus ramosus Agassiz.*Agassiz, L.* 1843 B (1838), iii, p. 97, pl. xi, figs. 5-8.Davis, J. W. 1883 A, p. 390, pl. 1, figs. 1-7 (*O. ramosus*); p. 399, pl. li, fig. 15 (*O. subteres*).Kindle, E. M. 1898 A, p. 484. (*O. multicaarinatus*.)

Koninck, L. G. de 1844 A, p. 613, pl. lv, fig. 2.

1878 A, p. 30, pl. iv, fig. 1.

Newberry, J. S. 1889 A, pp. 185, 205, pl. xxvii, fig. 29.

Newberry and Worthen 1866 A, p. 62, pl. iv, figs. 13-13a. (*O. multicaarinatus*.)

Romanovsky, G. 1864 A, p. 157, fig. 2.

Woodward, A. S. 1889 D, p. 231 (*O. ramosus*); p. 237 (*O. ? multicaarinatus*).

Subcarboniferous; Europe, Indiana, Michigan.

Orodus tuberculatus Newb. and Worth.*Newberry and Worthen* 1866 A, p. 66, pl. iv, figs. 9, 9a.

Woodward, A. S. 1888 D, p. 234.

Subcarboniferous (Burlington); Illinois, Iowa.

Orodus turgidus St. J. and Worth.*St. John and Worthen* 1875 A, p. 310, pl. vi, figs.

4, 5.

Woodward, A. S. 1889 D, p. 238.

Subcarboniferous (Chester); Illinois.

Orodus variabilis Newb.*Newberry, J. S.* 1875 A, p. 50, pl. lviii, figs. 11-11h.

Lesley, J. P. 1889 A, p. 506, figure.

Newberry, J. S. 1873 A, p. 279. (No description; syn. ? of *Ctenacanthus furcicarinatus*.)

Woodward, A. S. 1889 D, p. 238.

Subcarboniferous (Waverly); Ohio, Kentucky.

Orodus varicosatus St. J. and Worth.*St. John and Worthen* 1875 A, p. 304, pl. viii, figs. 1-9.

Hambach, G. 1890 A, p. 81.

Woodward, A. S. 1889 D, p. 238.

Subcarboniferous (Burlington); Illinois, Iowa, Missouri (*vide* Hambach).**Orodus whitei** St. J. and Worth.*St. John and Worthen* 1875 A, p. 297, pl. vi, fig. 25.

Woodward, A. S. 1889 D, p. 238.

Subcarboniferous (Kinderhook); Iowa.

LEIODUS St. J. and Worth. Type *L. calcaratus*, St. J. and Worth.*St. John and Worthen* 1875 A, p. 335.Miller, S. A. 1889 A, p. 600. (*Liodus*.)

Woodward, A. S. 1889 D, p. 240.

Leiodus calcaratus St. J. and Worth.*St. John and Worthen* 1875 A, p. 336, pl. vii, figs. 11-18.Miller, S. A. 1889 A, p. 600, fig. 1141. (*Liodus*.)

Woodward, A. S. 1889 D, p. 240.

Subcarboniferous (Burlington); Illinois, Iowa.

Leiodus grossipunctatus St. J. and Worth.*St. John and Worthen* 1875 A, p. 337.

Woodward, A. S. 1889 D, p. 240.

Subcarboniferous (Keokuk); Illinois, Iowa.

CAMPODUS Koninck. Type *C. agassizianus* Koninck.*Koninck, L. G. de* 1844 A, p. 617.Amer. Geologist 1888 A, p. 133. (*Lophodus*.)Davis, J. W. 1882 B, p. 50. (*Agassizodus*.)

Jaekel, O. 1894 A, p. 137.

Lohest, M. 1884 A, pp. 295, 305.

Miller, S. A. 1889 A, p. 587. (*Agassizodus*.)Mudge, B. F. 1875 A. (*Agassizodus*.)Newberry and Worthen 1870 A, p. 360. *Lophodus*, type *L. variabilis*; not *Lophodus* of Romanovsky.)

Pictet, F. J. 1854 A, p. 267.

St. John and Worthen 1875 A, pp. 297, 311, 316. (*Agassizodus*, to replace *Lophodus*.)

Woodward, A. S. 1889 D, p. 238.

Zittel, K. A. 1890 A, p. 75.

St. John and Worthen 1875 A, pp. 316, 323, pl. viii, fig. 24. (*Agassizodus*.)Woodward, A. S. 1889 D, p. 239. (*Campodus*.)

Coal-measures; Illinois, Kansas.

Campodus scitulus (St. J. and Worth.).*St. John and Worthen* 1875 A, p. 322, pl. vi, figs. 16-18c. (*Agassizodus*.)Cope, E. D. 1894 F, p. 433. (*Orodus*, section *Agassizodus*.)Woodward, A. S. 1889 D, p. 239. (*Campodus*.)

Coal-measures; Illinois, Iowa.

Campodus variabilis (Newb. and Worth.).*Newberry and Worthen* 1870 A, p. 361, pl. iv, figs. 4-4b; 5, 5a; 11-11b. (*Lophodus*.)Lohest, M. 1884 A, p. 305. (*Campodus*.)Miller, S. A. 1889 A, p. 587, fig. 1101. (*Agassizodus*.)*St. John and Worthen* 1875 A, p. 318, pl. viii, figs. 1-22. (*Agassizodus*.)Woodward, A. S. 1889 D, p. 239. (*Campodus*.)

Subcarboniferous; Belgium; Coal-measures; West Virginia, Iowa, Kansas.

Campodus basalis (Cope).*Cope, E. D.* 1894 F, p. 432, pl. xviii, figs. 6, 7. (*Orodus*, with *Agassizodus* as a section.)

Coal-measures; Illinois.

Campodus corrugatus (Newb. and Worth.).*Newberry and Worthen* 1870 A, p. 358, pl. iii, figs. 18, 18a. (*Orodus*.)

Campodus virginianus (St. J. and Worth.).

St. John and Worthen 1875 A, p. 321, pl. viii, figs. 23a-23d. (Agassizodus.)

Cope, E. D. 1894 F, p. 433. (Orodus, section Agassizodus.)

Lohest, M. 1884 A, p. 306. (Campodus agassizianus.)

Woodward, A. S. 1889 D, p. 238. (C. agassizianus.) Coal-measures; West Virginia.

MESODMODUS St. J. and Worth. Type *M. exsculptus* St. J. and Worth.

St. John and Worthen 1875 A, p. 290.

Miller, S. A. 1889 A, p. 602.

Woodward, A. S. 1889 D, p. 239.

Mesodmodus explanatus St. J. and Worth.

St. John and Worthen 1875 A, p. 293, pl. v, figs. 15-17.

Woodward, A. S. 1889 D, p. 239.

Subcarboniferous (Kinderhook); Iowa.

Mesodmodus exsculptus St. J. and Worth.

St. John and Worthen 1875 A, p. 291, pl. v, figs. 18-22.

Miller, S. A. 1889 A, p. 602, fig. 1148.

Woodward, A. S. 1889 D, p. 240.

Subcarboniferous (Kinderhook); Iowa.

Mesodmodus ornatus St. J. and Worth.

St. John and Worthen 1875 A, p. 294, pl. v, figs. 12-14.

Woodward, A. S. 1889 D, p. 240.

Subcarboniferous (Burlington); Illinois, Iowa.

DESMIODUS St. J. and Worth. Type *D. tumidus* St. J. and Worth.

St. John and Worthen 1875 A, p. 337.

Miller, S. A. 1889 A, p. 595.

Newberry, J. S. 1889 A, p. 186.

Woodward, A. S. 1889 D, p. 240.

Desmiodus costelliferus St. J. and Worth.

St. John and Worthen 1875 A, p. 341, pl. xA, figs. 10, 11.

Keyes, C. R. 1894 A, p. 230.

Miller, S. A. 1889 A, p. 595, fig. 1125.

Woodward, A. S. 1889 D, p. 240.

Subcarboniferous (St. Louis); Illinois, Missouri.

Desmiodus? flabellum St. J. and Worth.

St. John and Worthen 1875 A, p. 343, pl. xA, fig. 15.

Keyes, C. R. 1894 A, p. 230.

Woodward, A. S. 1889 D, p. 240.

Subcarboniferous (Keokuk); Missouri.

Desmiodus? ligoniformis St. J. and Worth.

St. John and Worthen 1875 A, p. 342, pl. xA, figs. 12-14.

Keyes, C. R. 1894 A, p. 230.

Woodward, A. S. 1889 D, p. 240.

Subcarboniferous (Keokuk); Missouri, Iowa.

Desmiodus minusculus (Newb. and Worth.).

Newberry and Worthen 1866 A, p. 67, pl. iv, fig. 11. (Orodus.)

St. John and Worthen 1875 A, p. 339, 340. (Desmiodus.)

Woodward, A. S. 1889 D, p. 237. (Orodus.)

Subcarboniferous (Keokuk); Illinois.

Desmiodus tumidus St. J. and Worth.

St. John and Worthen 1875 A, pp. 299, 339, pl. xA, figs. 7-9.

Keyes, C. R. 1894 A, p. 230.

Woodward, A. S. 1889 D, p. 240.

Subcarboniferous (St. Louis); Illinois, Missouri.

PETRODUS McCoy, F. Type *P. patelliformis* McCoy.

McCoy, F. 1848 A, p. 132.

Davis, J. W. 1883 A, p. 400.

Jaekel, O. 1899 A, p. 278. (Syn.? of Polyrhizodus.)

Koninck, L. G. de 1878 A, p. 36.

Lohest, M. 1884 A.

McCoy, F. 1855 A, p. 637.

Miller, S. A. 1889 A, p. 606.

Newberry and Worthen 1866 A, p. 71.

1870 A, p. 346.

Pictet, F. J. 1854 A, p. 263.

Trautschold, H. 1874 B, p. 298. (Ostinaspis.)

Woodward, A. S. 1889 D, p. 245.

Zittel, K. A. 1890 A, p. 76.

It is probable that the bodies included in this genus are not teeth but dermal tubercles.

Petrodus acutus Newb. and Worth.

Newberry and Worthen 1866 A, p. 72, pl. iv, fig. 17.

Trautschold, H. 1874 B, p. 209, pl. xxviii, fig. 12. (Ostinaspis.)

Woodward, A. S. 1889 D, p. 247.

Coal-measures; Illinois.

Petrodus occidentalis Newb. and Worth.

Newberry and Worthen 1866 A, p. 70, pl. iv, figs. 15-16a.

Jaekel, O. 1899 A, p. 283.

Keyes, C. R. 1888 A, p. 243.

Kindle, E. M. 1898 A, p. 485.

Lesley, J. P. 1889 A, p. 628, figures.

Newberry and Worthen 1870 A, p. 346.

STEMMATIAS Hay. Type *Stemmatodus cheiriformis* St. J. and Worth.

Hay, O. P. 1899 E, p. 784.

Davis, J. W. 1892 A, pp. 721, 726. (Syn. of *Pleuranthus*.)

Jaekel, O. 1899 A, p. 278. (*Stemmatodus*, syn. of *Polyrhizodus*.)

Lesley, J. P. 1890 A, p. 1048.

St. John and Worthen 1875 A, p. 328. (*Stemmatodus*; preoccupied by Heckel.)

Ward, J. 1890 A, p. 153. (*Stemmatodus*.)

Wellburn, E. D. 1899, Proc. Yorksh. Geol. Polytech. Soc., xiii, p. 425. (*Stemmatodus*.)

Woodward, A. S. 1889 D, pp. 245, 247. (*Stemmatodus*.)

Stemmatias bicristatus (St. J. and Worth.).

St. John and Worthen 1875 A, p. 331, pl. viii, figs. 32, 33, 35. (*Stemmatodus*.)

Hay, O. P. 1899 E, p. 784.

Lesley, J. P. 1890 A, p. 1048, figures. (*Stemmatodus*.)

Woodward, A. S. 1889 D, p. 247. (*Stemmatodus*.)
Subcarboniferous (Burlington); Iowa.

Stemmatias bifurcatus (St. J. and Worth.).

St. John and Worthen 1875 A, p. 330, pl. viii, figs. 31a-31c. (*Stemmatodus*.)

Hay, O. P. 1899 E, p. 784.

Lesley, J. P. 1890 A, p. 1048, figures. (*Stemmatodus*.)

Woodward, A. S. 1889 D, p. 247. (*Stemmatodus*.)
Subcarboniferous (Burlington); Iowa.

Stemmatias cheiriformis (St. J. and Worth.).

St. John and Worthen 1875 A, p. 330, pl. viii, figs. 29, 30. (*Stemmatodus*.)

Hay, O. P. 1899 E, p. 784.

Lesley, J. P. 1890 A, p. 1048, figures. (*Stemmatodus*.)

Woodward, A. S. 1889 D, p. 246.

Coal-measures; Illinois, Indiana.

Petrodus ? pustulosus Newb. and Worth.

Newberry and Worthen 1870 A, p. 369, pl. ii, figs. 5, 5a; pl. iii, fig. 6.

Newberry, J. S. 1889 A, p. 178.

Woodward, A. S. 1889 D, p. 247.

Subcarboniferous (Burlington); Iowa.

Woodward, A. S. 1889 D, p. 247. (*Stemmatodus*.)
Subcarboniferous (Burlington); Iowa.

Stemmatias compactus (St. J. and Worth.).

St. John and Worthen 1875 A, p. 334, pl. viii, figs. 38a-38c. (*Stemmatodus*.)

Hay O. P. 1899 E, p. 784.

Lesley, J. P. 1890 A, p. 1049, figure. (*Stemmatodus*.)

Woodward, A. S. 1889 D, p. 247. (*Stemmatodus*.)
Subcarboniferous (Chester); Illinois.

Stemmatias keokuk (St. J. and Worth.).

St. John and Worthen 1875 A, p. 334. (*Stemmatodus*.)

Hay, O. P. 1899 E, p. 784.

Woodward, A. S. 1889 D, p. 247. (*Stemmatodus*.)
Subcarboniferous (Keokuk); Iowa, Illinois.

Stemmatias simplex (St. J. and Worth.).

St. John and Worthen 1875 A, p. 332, pl. viii, figs. 34, 36, 37. (*Stemmatodus*.)

Hay, O. P. 1899 E, p. 784.

Lesley, J. P. 1890 A, p. 1049, figures. (*Stemmatodus*.)

Woodward, A. S. 1889, D, p. 247. (*Stemmatodus*.)

Subcarboniferous (Burlington); Iowa.

Stemmatias symmetricus (St. J. and Worth.).

St. John and Worthen 1875 A, p. 333, pl. viii, fig. 28. (*Stemmatodus*.)

Hay, O. P. 1899 E, p. 784.

Lesley, J. P. 1890 A, p. 1049, figures. (*Stemmatodus*.)

Woodward, A. S. 1889 D, p. 247. (*Stemmatodus*.)
Subcarboniferous (Burlington); Iowa.

HETERODONTIDÆ.

Gill, T. 1862 A. (*Heterodontoidæ*.)

Agassiz, L. 1843 B (1838), iii, pp. 83, 159. ("Cestraciantes.")

Brown, C. 1900 A, p. 173. (*Cestraciantidæ*, *Hybodontidæ*.)

Davis, J. W. 1882 B. (*Hybodontidæ*.)
1883 A, pp. 331, 332. (*Hybodontidæ*.)

Fraas, E. 1896 A, pp. 17, 18. (*Hybodontidæ*, *Aerodontidæ*, *Cestraciantidæ*.)

Fritsch A. 1889 B, p. 97. (*Hybodontidæ*.)

Garman, S. 1885 B, p. 31. (*Hybodontidæ*.)

Gegenbaur, C. 1872 A. (*Cestraciodontidæ*.)

Gill, T. 1872 C, p. 23. (*Heterodontidæ*.)

1884 B, p. 346. (*Hybodontidæ*, *Heterodontidæ*.)

Günther, A. 1880 A, p. 328. (*Hybodontidæ*, *Cestraciantidæ*.)

1881 A, p. 685. (*Hybodontidæ*, *Cestraciantidæ*.)

Hasse, C. 1878 A. (*Hybodontidæ*, *Cestraciantidæ*.)
1879 A, p. 50 ("Aerodontiden"); p. 68 (*Hybodontidæ*.)

1882 A, p. 183. (*Cestraciantidæ*.)

Haswell, W. A. 1884 A. (*Cestraciantidæ*.)

Howes, G. B. 1887 A. (Cestracion.)
 Huxley, T. H. 1876 A. (Cestraciontidae.)
 Jaekel, O. 1890 D, p. 121, fig. 2. (Cestracion.)
 1894 A, p. 137. (Heterodontus.)
 Koninck, L. G. de 1878 A, p. 29. (Cestraciontidae.)
 Marsh, O. C. 1877 E. (Cestraciontidae.)
 Mayer, P. 1882 A, p. 277. (Cestraciontidae.)
 Miyart, St. G. 1879 A, p. 449, pl. lxxvi. (Cestracion.)
 Müller and Henle 1841 A, p. 76. (Cestraciones.)
 Nicholson and Lydekker 1889 A, p. 940. (Hybodontidae, Cestraciontidae.)
 Owen, R. 1860 E, p. 106. (Cestraciontidae.)
 Pictet, F. J. 1854 A, p. 254 ("Hybodontes"); p. 260 ("Cestraciontes").

Quenstedt, F. A. 1885 A, p. 272 ("Hybodonten"); p. 278 ("Cestracionten").
 Reis, O. M. 1897 A, p. 69. ("Hybodonten").
 Stannius, H. 1854 A. (Cestraciones.)
 Steinmann and Döderlein 1890 A, pp. 545, 546. (Hybodontidae, Cestraciontidae.)
 Tomes, C. S. 1898 A, p. 244 ("Cestracionts").
 Woodward, A. S. 1884 A, p. 267. (Hybodontidae.)
 1885 B, p. 106. (Cestraciontidae.)
 1889 D, p. 229. (Cestraciontidae.)
 1898 B, pp. 42, 44. (Cestraciontidae.)
 Zittel, K. A. 1890 A, p. 66 (Hybodontidae); p. 74 (Cestraciontidae.).

HYBODUS Agassiz. Type *H. plicatilis* Agassiz.

Agassiz, L. 1843 B (1837), pp. 41, 178.
 1843 B, p. 201. (Sphenonchus, in part.)
 1844 A.
 Barkas, W. J. 1874 A, p. 386.
 1877 B, p. 145.
 Brown, C. 1900 A, p. 149, pls. xv, xvi.
 Day, E. C. H. 1864 A.
 Egerton, P. G. 1845 A, pl. iv.
 Fraas, E. 1896 A.
 Garman, S. 1885 B, p. 31.
 Giebel, C. G. 1848 A, p. 311.
 Jaekel, O. 1884 A, p. 294.
 1898 B, p. 135 (Hybodus); p. 138 (Orthyodus); p. 143 (Parahybodus).
 Mackie, S. J. 1863 A.
 Nicholson and Lydekker 1889 A, p. 940.
 Owen, R. 1845 B, p. 56, pl. xi.
 1860 E, p. 105.
 Pictet, F. J. 1854 A, p. 255.
 Quenstedt, F. A. 1852 A, p. 174.
 1885 A, p. 273.
 Steinmann and Döderlein 1890 A, p. 546.
 Williamson, W. C. 1849 A, p. 465, pl. 43, fig. 33.
 Woodward, A. S. 1884 A, p. 268.
 1886 A.
 1888 I, p. 251.

Woodward, A. S. 1888 J, p. 58.
 1889 D, p. 250.
 1889 E.
 1889 F.
 1898 B, p. 44.
 Woodward and Sherborn 1890 A, p. 99.
 Zittel, K. A. 1890 A, p. 67.

Hybodus clarkensis Cragin.

Cragin, F. W. 1894 A, p. 72, pl. ii, figs. 11-14.
 Cretaceous (Neocomian); Kansas.

Hybodus copei Hay.

Hay, O. P. 1899 E, p. 784.
 Cope, E. D. 1891 B, p. 448, pl. xxviii, fig. 2. (H regularis; preoccupied by Reuss, 1846.)
 Triassic?; Texas.

Hybodus polyprion Agassiz.

Agassiz, L. 1843 B, iii, p. 185, pl. xxiii, figs. 1-15.
 Marsh, O. C. 1889 A, p. 230.
 Woodward, A. S. 1886 C, p. 257, pl. vi, figs. 1, 2.
 1889 D, p. 268.
 Stonesfield Slate, England: Jurassic; Black Hills, Wyoming.

ACRODUS Agassiz. Type *A. gaillardoti* Agassiz.

Agassiz, L., 1837, in H. B. Geinitz, Beiträge Kennt. Thüring. Muschelkgeb., p. 21. (Fide A. S. Woodward.)
 1843 B (1838), iii, p. 139 (Acrodus); p. 201 (Sphenonchus, in part).
 844 A.
 Day, E. C. H. 1864 A.
 Giebel, C. G. 1848 A, p. 325.
 Hasse, C. 1882 A, p. 191, pls. xxiv, xxv.
 Jaekel, O. 1884 A, p. 311.
 1890 A, p. 93.
 1891 D, p. 191.
 1894 A, p. 132.
 1899 A, p. 296.
 Nicholson and Lydekker 1889 A, p. 942.
 Owen, R. 1845 B, p. 54, pls. xiv-xvi.
 1860 E, p. 109.
 Pictet, F. J. 1854 A, p. 261.
 Quenstedt, F. A. 1852 A, p. 178.
 1885 A, p. 278.
 Steinmann and Döderlein 1890 A, p. 546.

Traquair, R. H. 1888 A, p. 84.
 Woodward, A. S. 1885 B, p. 107.
 1889 D, p. 279.
 1889 E.
 1889 F.
 Woodward and Sherborn, 1890 A, p. 5.
 Zittel, K. A. 1890 A, p. 76.

Acrodus emmonsi Leidy.

Leidy, J. 1872 M, p. 163.
 Emmons, E. 1858 B, p. 244, fig. 97. ("Acrodus.")
 Leidy, J. 1873 B, pp. 301, 352.
 Woodward, A. S. 1889 D, p. 298.
 Miocene?; North Carolina?

Acrodus humilis Leidy.

Leidy, J. 1872 M, p. 163.
 1873 B, pp. 300, 352, pl. xxxvii, fig. 5.
 Woodward, A. S. 1889 D, p. 298.
 Cretaceous; New Jersey.

Superfamily HEXANCHOIDEA,¹ *nom. nov.*

- Gill, T. 1882, Jordan & Gilbert's Synop. Fishes N. A., p. 967. (Opistharthri.)
 1884 B, p. 346. (Opistharthri.)
 1893 A, p. 129. (Opistharthri.)
 Hasse, C. 1878 A. (Palæonotidani.)
 1879 A, p. 35. (Diplospondyli.)

- Haswell, W. A. 1884 A, p. 112. (Palæoselachii.)
 Jordan & Evermann 1896 A, p. 17. (Diplospondyli.)
 Koken, E. 1889 A, p. 90. (Opistharthri.)
 Osborn, H. F. 1899 I, p. 158. (Notidani.)
 Woodward, A. S. 1889 D, p. ix. ("Opistharthri.")

HEXANCHIDÆ.

Gill, T., 1885, Report Smithsonian Inst. for 1884, p. 618.

The following authors, unless otherwise indicated, refer to this group under the name *Notidanidæ*:

- Brown, C. 1900 A, pp. 169, 174.
 Duméril, A. 1865 A, p. 430. (Notadani.)
 Fritsch, A. 1895 A, p. 46.
 Gadow, H. 1889 A. (Heptanchus.)
 Gegenbaur, C. 1865 B.
 1872 A.
 1872 B.
 Gill, T. 1893 A, p. 129. (Hexanchidæ.)
 Günther, A. 1870 A, pp. 355, 397.
 1880 A, p. 324.
 1881 A, p. 685.

- Hasse, C. 1879 A, p. 35.
 1882 A, p. 37.
 Haswell, W. A. 1884 A, p. 112.
 Jaekel, O. 1894 A.
 Kolliker, A. 1863 A, p. 1. (Hexanchus.)
 Müller and Henle 1841 A, p. 80.
 Noetling, F. 1885 A, p. 16.
 Reis, O. M. 1897 A, pp. 69, 86.
 Sagemehl, M. 1883 A, p. 227.
 Semon, R. 1899 A, p. 76.
 Stannius, H. 1854 A. (Notidani.)
 Steinmann and Döderlein 1890 A, p. 547.
 White, P. J. 1895 A.
 Woodward, A. S. 1889 D, p. 157.
 Zittel, K. A. 1890 A, p. 65.

HEPTRANCHIAS Rafinesque. Type *Squalus cinereus* Gmelin.

Rafinesque, C. S. 1810, Caratteri di alcuni nuovi generi, p. 13.

Unless indicated otherwise, the following authors refer to this genus and *Hexanchus* under the name *Notidanus*.

- Agassiz, L. 1843 B, iii, pp. 216, 308.
 Brown, C. 1900 A.
 Cuvier, G. 1817, Règne Anim, Ed. 1, p. 128.
 Duméril, A. 1865 A, p. 432. (Heptanchus.)
 Gegenbaur, C. 1872 A, pl. i, figs 1, 2; pl. iii, figs. 6, 7; pl. iv, figs. 1, 2; pl. vii, figs. 1, 2; pl. x; pl. xv, figs. 1, 2; pl. xvi, fig. 3; pl. xviii; pl. xx, figs. 2, 3, 5, 6, 8; pl. xxi, fig. 5. (Heptanchus and Hexanchus.)
 1872 B. (Hexanchus, Heptanchus.)
 Gibbes, R. W. 1849 A, p. 195.
 Günther, A. 1870 A, p. 397.
 1880 A, p. 325.
 Hasse, C. 1882 A, p. 39, pl. vi (Hexanchus); p. 44. pl. vi, vii (Heptanchus).
 Haswell, W. A. 1884 A, pp. 73, 88. (Heptanchus.)
 Hubrecht, A. A. W. 1878 A.
 Huxley, T. H. 1876 A.
 Kolliker, A. 1860 B. (Heptanchus.)
 Lawley, R. 1875 A.
 Mayer, P. 1886 A, p. 263. (Heptanchus.)
 Mivart, St. G. 1879 A, p. 443, pl. lxxv, fig. 2.
 Müller and Henle, 1841, p. 80 (Hexanchus); p. 81 (Heptanchus).
 Parker, T. J. 1890 A.
 Pedroni, P. M. 1844 A, p. 281.
 Pictet, F. J. 1854 A, p. 243.
 Probst, J. 1879 A, p. 156.

- Quenstedt, F. A. 1885 A, p. 262.
 Rafinesque, C. S., 1810, Caratteri di alcuni nuovi generi, p. 14. (Hexanchus.)
 Reis, O. M. 1897 A, p. 69.
 Stannius, H. 1854 A.
 Woodward, A. S. 1886 C.
 1889 D, p. 157.
 1892 G, figs. 9-12.
 1899 A, p. 6.
 Zittel, K. A. 1890 A, p. 66.

Heptranchias ? plectrodon (Cope).

Cope, E. D. 1867 C, p. 141. (Notidanus.)
 Tertiary; Maryland.

Heptranchias ? primigenius (Agassiz).

Agassiz, L. 1843 B, iii, p. 218, pl. xxvii, figs. 6-8, 13-17; doubtfully figs. 4, 5. (Notidanus.)

The following authors refer this species to the genus *Notidanus*.

- Agassiz, L. 1843 B, p. 220, pl. xxvii, figs. 9-12. (N. recurvus.)
 Bassani, F. 1899 A, p. 25, pl. ii, figs. 13-15.
 Cope, E. D. 1867 C, p. 141.
 1875 H, p. 362.
 1875 V, p. 29.
 Dana, J. D. 1896 A, p. 901, fig. 1515.
 Davis, J. W. 1888 A, p. 33, pl. vi, fig. 6.
 Gibbes, R. W. 1849 A, p. 195, pl. xxv, fig. 95.
 Lawley, R. 1875 A, p. 20, pl. i, figs. 1-5.
 Leidy, J. 1877 A, p. 254.
 Noetling, F. 1885 A, p. 17, pl. i, figs. 4, 5.
 Pedroni, P. M. 1844 A, p. 281, pl. i, figs. 10, 11.

¹This name is proposed simply for the purpose of conforming to the rule, adopted by many zoologists, of deriving the superfamily name from the name of a typical family by changing the termination *idæ* into *oidea*.

Probst, J. 1858 A, p. 124, figs. 1-10.

1879 A, p. 158, pl. iii, figs. 1-5 (N. primigenius); p. 162, pl. iii, figs. 12-17 (N. recurvus); p. 166, pl. iii, figs. 6-11 (N. d'ancône).

Quenstedt, F. A. 1852 A, p. 167, pl. xiii, fig. 3.

1885 A, p. 263, pl. xx, fig. 6.

Woodward, A. S. 1886 C, pp. 216, 253, pl. vi, figs. 19-22.

1889 D, p. 163.

Wyman, J. 1850 B, p. 234.

Zittel K. A. 1890 A, p. 66, fig. 60.

Eocene and Miocene; Europe: Eocene; Virginia: Miocene; New Jersey, Maryland, North Carolina.

XIPHODOLAMIA Leidy. Type *X. ensis* Leidy.

Leidy, J. 1877 A, p. 252.

Woodward, A. S. 1889 D, p. 168. (Syn. ? of Notidanus.)

1899 A, p. 6. (Syn. ? of Notidanus.)

Xiphodolamia ensis Leidy.

Leidy, J. 1877 A, p. 252, pl. xxxiv, figs. 25-30.

Woodward, A. S. 1889 D, p. 168. (Notidanus?)

1899 A, p. 6.

"Marls" (Cretaceous?); New Jersey.

Superfamily GALEOIDEA,¹ nom. nov.

Gill, T. 1893 A, p. 129. (Astrospondyli, in part.)

Hasse, C. 1879 A, p. 48. (Astrospondyli.)

1882 A, pp. 186-284. (Astrospondyli.)

Haswell, W. A. 1884 A, p. 113. (Neoselachii, in part.)

Jaekel, O. 1890 A, p. 110. (Astrospondyli.)

1894 A, p. 53. (Actinospondyli, in part.)

Jordan and Evermann, 1896 A, p. 21. (Galei.)

Woodward, A. S. 1889 D, p. 157. (Astrospondyli, in part.)

LAMNIDÆ.

Davis, J. W. 1890 A, p. 365.

Duméril, A. 1865 A, p. 403. (Lamnæ.)

Gill, T. 1862 A, p. 397. (Lamnoidæ.)

Günther, A. 1870 A, pp. 354, 389.

1880 A, p. 319.

1881 A, p. 685.

Hasse, C. 1882 A, p. 214. ("Familie Lamna.")

Haswell, W. A. 1884 A, p. 114.

Jaekel, O. 1894 A, p. 157.

Jordan and Evermann 1896 A, p. 47.

Kiprijanoff, V. 1854 A, p. 373.

Kölliker, A. 1863 A. (Lamnoidei.)

Mayer, P. 1880 A, p. 277.

Müller and Henle 1838 A, p. 36. (Lamnoidea.)

1841 A, p. 66. (Lamnæ.)

Nicholson and Lydekker 1889 A, p. 944.

Probst, J. 1879 A, p. 127.

Stannius, H. 1854 A. (Lamnoidei.)

Steinmann and Döderlein 1890 A, p. 547.

Woodward, A. S. 1884 A, p. 228.

1889 D, p. 349.

Zittel, K. A. 1890 A, p. 81.

CARCHARIINÆ.

Duméril, A. 1865 A, p. 416. (Odontaspides.)

Gill, T. 1862 A, p. 398. (Odontaspidoidæ.)

1893 A, p. 130. (Carchariidæ.)

Jordan and Evermann 1896 A, p. 46. (Carchariidæ.)

Müller and Henle 1841 A, p. 73. (Odontaspides.)

CARCHARIAS Raf. Type *C. taurus* Raf.

Rafinesque, C. S., 1810, Caratteri di alcuni nuovi generi, p. 10.

Agassiz, L. 1843 B (1838), iii, pp. 87, 287, 306. (Odontaspis.)

Davis, J. W. 1890 A, p. 368. (Odontaspis.)

Duméril, A. 1865 A, p. 417. (Odontaspis.)

Günther, A. 1870 A, p. 354. (Odontaspis.)

1880 A, p. 321. (Odontaspis.)

Hasse, C. 1882 A, pp. 160, 230. (Odontaspis.)

Jordan and Evermann 1896 A, p. 46. (Carcharias.)

Kölliker, A. 1863 A, p. 14, figs. 6, 7. (Odontaspis.)

Müller and Henle 1837 A, p. 114. (Odontaspis.)

1837 B, p. 397.

1841 A, p. 73. (Odontaspis.)

Pictet, F. J. 1854 A, p. 251. (Odontaspis.)

Probst, J. 1859 A. (Odontaspis.)

Woodward, A. S. 1884 A, p. 228. (Odontaspis.)

1889 D, p. 360. (Odontaspis.)

1899 A, p. 7. (Odontaspis.)

Woodward and Sherborn 1890 A, p. 129. (Odontaspis.)

Zittel, K. A. 1890 A, p. 81. (Odontaspis.)

Carcharias contortidens (Agassiz).

Agassiz, L. 1843 B, iii, p. 294, pl. xxxvii, a, figs. 17-23. [Lamna (Odontaspis).]

Emmons, E. 1858 B, p. 239. [Lamna (Odontaspis).]

Gemmellaro, G. G. 1857 A, p. 320, pl. i, fig. 13; pl. vi a, figs. 18-20. [Lamna (Odontaspis).]

Gibbes, R. W. 1849 A, p. 197, pl. xxvi, fig. 119. [Lamna (Odontaspis).]

Giebel, C. G. 1848 A, p. 363. (Odontaspis.)

Jaekel, O. 1898 C, p. 163. (Odontaspis.)

Probst, J. 1859 A, p. 101. [Lamna (Odontaspis)].

1879 A, p. 144, pl. ii, figs. 33-39. [Lamna (Odontaspis).]

Sismonda, E. 1849 A, p. 48, pl. ii, figs. 25-28. [Lamna (Odontaspis).]

¹ See note under *Hexanchioidea*, p. 300.

Tuomey, M. 1858 A, p. 268. (Lamna.)
 Woodward, A. S. 1889 D, p. 366. (Odontaspis.)
 Eocene and Miocene; Europe: Eocene; South
 Carolina and Alabama: Miocene?; North Caro-
 lina.

Carcharias duplex (Agassiz)

Agassiz, L. 1843 B, iii, p. 297, pl. xxxvii a, fig. 1.
 [Lamna (Odontaspis).]
 Tuomey M. 1858 A, p. 268. (Lamna.)
 Woodward, A. S. 1889 I, p. 375. (Odontaspis.)
 Said by Tuomey to occur in Tertiary of Ala-
 bama. The identification is doubtful.

Carcharias verticalis (Agassiz).

Agassiz, L. 1843 B, iii, p. 294, pl. xxxvii a, figs.
 31, 32. (Odontaspis.)
 Dames, W. 1883 B, p. 145, pl. iii, figs. 8-10. (Odon-
 taspis.)
 Gibbes, R. W. 1849 A, p. 198, pl. xxvi, figs. 124-
 127. [Lamna (Odontaspis).]
 Giebel, C. G. 1848 A, p. 363. (Odontaspis.)
 Tuomey, M. 1858 A, p. 268. (Lamna.)
 Woodward, A. S. 1889 D, p. 375. (Odontaspis.)
 Eocene: Europe, Egypt, South Carolina, Ala-
 bama.

LAMNINÆ.

Gill, T. 1862 A, p. 398.

Jordan and Evermann 1896 A, p. 47.

SPHENODUS Agassiz. Type *Sphenodus longidens* Agassiz.

Agassiz, L. 1843 B, iii, p. 288.
 Davis, J. W. 1890 A, p. 349.
 Quenstedt, F. A. 1852 A, p. 172.
 1885 A, p. 270.
 Woodward, A. S. 1889 D, p. 349. (Orthacodus, for
Sphenodus Agassiz, regarded as preoccupied by
Sphenodon Gray, 1831.)

Zittel, K. A. 1890 A, p. 81.

Sphenodus rectidens Emmons.

Emmons, E. 1858 B, p. 235, figs. 61, 62.
 Cretaceous; North Carolina.

LAMNA Cuvier. Type *Squalus cornubicus* Gmelin.

Cuvier G. 1817, Règne Anim., ed. 1, v, ii, p. 126.
 Agassiz, L. 1843 B, iii, p. 287, 306.
 Davis, J. W. 1888 A, p. 15.
 1890 A, p. 371.
 Duméril, A. 1865 A, p. 404.
 Gibbes, R. W. 1849 A, p. 196.
 Günther, A. 1870 A, p. 389.
 Hasse, C. 1882 A, p. 215, pl. xxviii.
 Jordan and Evermann 1896 A, p. 49.
 Klunzinger, C. B. 1871 A, p. 669.
 Kölliker, A. 1863 A, p. 8, fig. 3.
 Müller and Henle 1837 A, p. 114.
 1837 B, p. 397.
 1841 A, p. 67.
 Nicholson and Lydekker 1889 A, p. 944.
 Pictet, F. J. 1854 A, p. 249.
 Probst J. 1859 A.
 Quenstedt, F. A. 1852 A, p. 170.
 1885 A, p. 268.
 Sismonda, E. 1849 A, p. 45.
 Stephan, P. 1900 A, p. 327.
 Tomes, C. S. 1898 A, p. 79.
 Woodward, A. S. 1884 A, p. 228.
 1889 D, p. 392.
 Zittel, K. A. 1890 A, p. 82.

Lamna clavata Agassiz.

Agassiz, L. 1856 A, p. 275.
 1857 A, p. 316, pl. i, figs. 19-21.
 Woodward, A. S. 1889 D, p. 407.
 Miocene: California.

Lamna crassidens Agassiz.

Agassiz, L. 1843 B, iii, p. 292, pl. xxxv, figs. 8-21.
 Emmons, E. 1858 B, p. 240.

Gemmellaro, G. G. 1857 A, p. 318, pl. vi a, figs. 15,
 16.
 Gibbes, R. W. 1846 A, p. 42.
 1849 A, p. 197, pl. xxvi, figs. 116-118.
 Probst, J. 1879 A, p. 373, pl. ii, figs. 64-68.
 Woodward, A. S. 1889 D, p. 373. (Odontaspis?)
 Wyman, J. 1850 B, p. 233.
 Eocene, Europe, North Carolina (Emmons),
 South Carolina: Miocene?; Virginia (Wyman).

Lamna cuspidata Agassiz.

Agassiz, L. 1843 B, iii, p. 290, pl. xxxviii, figs.
 43-50.
 1843 B, iii, p. 291, pl. xxxviii, figs. 51-53
 (L. denticulata); p. 293, pl. xxxviii, figs. 27-30
 [L. (Odontaspis) hopei]; p. 295, pl. xxxviii,
 figs. 24-26 [L. (Odontaspis) dubia].
 Cope, E. D. 1867 C, p. 142. (L. cuspidata, L. den-
 ticulata?, L. hopei.)
 1875 E, p. 297.
 1875 H, p. 362. (L. cuspidata, L. denticu-
 lata.)
 1875 V, p. 29.
 Geinitz, H. B. 1883 A, p. 5, pl. i, figs. 1-3.
 Gibbes, R. W. 1846 A, p. 42.
 1849 A, p. 197, pl. xxv, figs. 103-106.
 1850 F. (L. cuspidata and L. denticulata.)
 Jaekel, O. 1898 C, p. 162.
 Leidy, J. 1872 F.
 1873 B, p. 304, pl. xviii, figs. 44, 45. (L. cus-
 pidata?).
 Lyell, C. 1845 A, p. 415.
 1859 A, p. 101. [Lamna (Odontaspis).]
 Noetling, F. 1885 A, p. 71, pl. v, figs. 1-3. (Odon-
 taspis hopei.)

Probst, J. 1879 A, p. 149, pl. ii, figs. 59-63. [Lamna (Odontaspis).]

Quenstedt, F. A. 1852 A, p. 171, pl. xiii, fig. 17 (Lamna cuspidata); fig. 15 (L. denticulata). 1885 A, p. 268, pl. xx, fig. 27.

Sauvage, H. E. 1882, p. 48, pl. i, figs. 15, 16.

Sismonda E. 1849 A, p. 47, pl. ii, figs. 29-32 (Lamna cuspidata); p. 48, pl. ii, figs. 17-22 (Lamna dubia).

Tuomey, M. 1858 A, p. 268.

Woodward, A. S. 1889 D, p. 368. (Odontaspis.)

Eocene; Europe, Georgia, Alabama, Virginia, Kansas, South Carolina: Miocene; Maryland, North Carolina (Cope).

Lamna elegans Agassiz.

Agassiz, L. 1843 B, iii, p. 289, pl. xxxv, figs. 1-5 (not figs. 6, 7); pl. xxxviii, fig. 59 (not fig. 58).

Bassani, F. 1899 A, p. 13, pl. i, figs. 1-17. (Odontaspis).

Clark, W. B. 1895 A, p. 4.

1897 A, p. 61.

Cope, E. D. 1867 C, p. 142.

1875 H, p. 362.

1875 V, p. 29.

Dana, J. D. 1896 A, p. 901, fig. 1514.

Davis, J. W. 1888 A, p. 15, pl. iii, fig. 1. (L. huttoni.)

Dixon, F. 1850 A, p. 203, pl. x, figs. 28-31.

1878 A, p. 249, pl. x, figs. 29-31.

Emmons, E. 1858 B, p. 239, figs. 70-71a.

Geinitz, H. B. 1883 A, p. 5, pl. i, figs. 4-6.

Gibbes, R. W. 1846 A, p. 42.

1849 A, p. 196, pl. xxv, figs. 96-102.

Leidy, J. 1872 F.

1873 B, p. 305.

1877 A, p. 254.

Noetling, F. 1885 A, p. 61, pl. iv, figs. 1-9.

Owen, R. 1845 B, p. 32, pl. v, figs. 3, 4; pls. vi, vii.

Sismonda, E. 1849 A, p. 46, pl. ii, figs. 33-35.

Tuomey, M. 1858 A, p. 261.

Woodward, A. S. 1884 A, p. 228.

1889 D, p. 361. (Odontaspis.)

1899 A, p. 8, pl. i, figs. 15-18. (Odontaspis.)

Wyman, J. 1850 B, p. 233.

Eocene and Miocene; Europe, New Zealand, Australia, and United States: Eocene; South Carolina, North Carolina, Alabama, and Virginia: Miocene; Maryland.

Lamna gracilis Agassiz.

Agassiz, L. 1843 B, iii, p. 295, pl. xxxvii a, figs. 2-4. [Lamna (Odontaspis).]

Eichwald, E. 1868 A, p. 1222, pl. xxxviii, fig. 10.

Gibbes, R. W. 1849 A, p. 198, pl. xxvi, figs. 128-130.

[Lamna (Odontaspis).]

Giebel, C. G. 1847 A, p. 362.

Pictet and Campiche 1858 A, p. 88, pl. xi, figs. 9-18. (Odontaspis.)

Sauvage, H. E. 1879 A, p. 59, pl. iii, figs. 1-12. (Odontaspis.)

Woodward, A. S. 1889 D, p. 359. (Scapanorhynchus?).

Cretaceous; Europe: Eocene; South Carolina.

Lamna macrorhiza Cope.

Cope, E. D. 1875 E, p. 297, pl. xlii, figs. 9, 10.

Williston, S. W. 1900 A, p. 38.

1900 B, p. 249.

Woodward, A. S. 1889 D, p. 399.

Cretaceous (Niobrara); Kansas: Cretaceous of Europe.

Lamna manitobensis Whiteaves.

Whiteaves, J. F. 1889 B, p. 192, pl. xxvi, figs. 6a, 6c.

Cretaceous (Niobrara); Manitoba.

Lamna mudgei Cope.

Cope, E. D. 1875 E, p. 297, pl. xlii, figs. 11, 12.

Williston, S. W. 1900 A, p. 38.

1900 B, p. 248.

Woodward, A. S. 1889 D, p. 408.

Cretaceous (Niobrara); Kansas: ("Green-sand"); New Jersey.

Lamna ornata Agassiz.

Agassiz, L. 1856 A, p. 275.

1857 A, p. 316, pl. i, fig. 28.

Woodward, A. S. 1889 D, p. 408.

Miocene; California.

Lamna ? quinquelateralis Cragin.

Cragin, F. W. 1894 A, p. 72, pl. ii, figs. 9, 10.

Williston, S. W. 1900 A, p. 39.

1900 B, p. 250.

Cretaceous (Comanche); Kansas.

Lamna rhapsiodon Agassiz.

Agassiz, L. 1843 B, iii, p. 296, pl. xxxvii a, figs. 12-16, not fig. 11. [Lamna (Odontaspis).]

Tuomey, M. 1858 A, p. 268.

Reported from the Tertiary of Alabama by Tuomey, but the identification is doubtful. For synonymy and literature see Woodward, A. S. 1889 D, p. 353. See also under *Lamna texana*.

Lamna subulata Agassiz.

Agassiz, L. 1843 B, iii, p. 296, pl. xxxvii a, figs. 5-7.

Cope, E. D. 1867 C, p. 142.

Geinitz, H. B. 1875 A, p. 209, pl. xxxviii, figs. 29-36.

Hébert, E. 1855 C, p. 355, pl. xxvii, fig. 10.

Professor Cope has reported this species with doubt from the Miocene of Charles County, Md. For synonymy and literature of the species see Woodward, A. S. 1889 D, p. 356, under name of *Scapanorhynchus ? subulatus*.

Lamna texana Roemer.

Roemer, F. 1849 A, p. 419.

Cope, E. D. 1875 E, p. 296.

1875 F, p. 63.

1875 K, p. 38.

Credner, H. 1870 A, p. 242.

Dana, J. D. 1896 A, p. 843, fig. 1402.

Leidy, J. 1873 B, p. 305, pl. xviii, figs. 46-49. (L. elegans?).

Newberry, J. S. 1876 A, p. 141.

Roemer, F. 1852 A, p. 29, pl. i, figs. 7a, 7b.

Williston, S. W. 1900 A, p. 40, pl. viii, fig. 4; pl. xiv, fig. 5. (Scapanorhynchus rhapsiodon.)

- Williston, S. W. 1900 B, p. 251, pl. xxvi, fig. 4; pl. xxxii, fig. 5. (*Scapanorhynchus raphiodon*.)
 Woodward, A. S. 1889 D, p. 353.
 Cretaceous; Texas, Kansas, Alabama, Mississippi, New Jersey, Kansas.

Lamna sp. indet.

- Williston, S. W. 1900 A, p. 38, pl. xii, figs. 5, 6.
 1900 B, p. 249, pl. xxx, figs. 5, 6.
 Cretaceous (Kiowa shales); Kansas.

LEPTOSTYRAX Willist. Type *L. bicuspidatus* Willist.

Williston, S. W. 1900 A, p. 42.

Leptostyrax bicuspidatus Willist.

- Williston, S. W.* 1900 A, p. 42.
 1900 B, p. 253, pl. xxiv, figs. 15, 15a; pl. xxvi, fig. 7.
 Cretaceous (Mentor beds); Kansas.

OTODUS Agassiz. Type *O. obliquus* Agassiz.

- Agassiz, L.* 1843 B, iii, pp. 266, 307.
 1844 A.
Davis, J. W. 1888 A, p. 14.
 1890 A, pp. 367, 401.
Gibbes, R. W. 1849 A, p. 198.
Hasse, C. 1882 A, p. 206, pl. xxvii.
Kiprijanoff, V. 1854 A, p. 377.
Nicholson and Lydekker 1889 A, p. 944.
Pictet, F. J. 1854 A, p. 245.
Pictet and Campiche 1858 A, p. 81.
Probst, J. 1879 A, p. 154.
Sismonda, E. 1849 A, p. 38.
Woodward, A. S. 1884 A, p. 229.
 1889 D, p. 392. (Syn. of *Lamna*.)
 1899 A, p. 10.
Zittel, K. A. 1890 A, p. 83.

Otodus ? apiculatus Agassiz.

- Agassiz, L.* 1843 B, iii, p. 275, pl. xxxii, figs. 32-35.
Eastman, C. R. 1895 A, p. 178. (Syn. of *Oxyrhina hastalis*.)
Gibbes, R. W. 1846 A, p. 42.
 1849 A, p. 200, pl. xxvi, fig. 147.
Woodward, A. S. 1889 D, p. 387.
 Eocene; South Carolina.

Otodus appendiculatus Agassiz.

- Agassiz, L.* 1843 B (1835), iii, p. 270, pl. xxxii, figs. 1-25.
Cope, E. D. 1867 C, p. 142.
 1875 E, p. 295.
 1875 H, p. 362.
Credner, H. 1870 A, p. 242.
Dana, J. D. 1896 A, p. 843, figs. 1401, 1404.
Davis, J. W. 1890 A, p. 402, pl. xli, figs. 1-11.
Dixon, F. 1850 A, pl. xxx, fig. 25; pl. xxxi, fig. 17.
Emmons, E. 1858 B, p. 240.
Geinitz, H. B. 1875 A, p. 208.
 1839 A, p. 11, pl. i, fig. 3 (*Squalus cornubicus*); p. 12, pl. i, fig. 5 (*Odontaspis raphiodon*).
Gibbes, R. W. 1846 A, p. 42.
 1849 A, p. 199, pl. xxvi, figs. 138-140.
 1850 F.
Giebel, C. G. 1848 A, p. 42.
Hébert, E. 1855 C, p. 355.
Pictet, F. J. 1854 A, p. 247.

- Pictet and Campiche* 1858 A, p. 82, pl. x, figs. 3, 4.
Priem, F. 1897 A, p. 40, pl. i, figs. 1-8. (*Lamna*.)
Quenstedt, F. A. 1852 A, p. 170, pl. xiii, fig. 8.
 1885 A, p. 268, pl. xx, figs. 23, 24.
Reuss, A. E. 1846 A, p. 5, pl. iii, figs. 22-29.
Roemer, F. 1849 A, p. 419.
 1852 A, p. 30, pl. i, figs. 9a, 9b.
Sauvage, H. E. 1870 A, p. 26, figs. 57-59 (*O. appendiculatus*); p. 34, figs. 73-75 (*Lamna acuminata*).
 1879 A, p. 60, pl. iii, fig. 21 (*O. appendiculatus*); p. 61, pl. iii, figs. 15-20 (*Lamna acuminata*).
Spillman, W. in *Hilgard, E. W.* 1860 A, p. 389.
Williston, S. W. 1900 A, p. xiv, figs. 3-3c. (*Lamna*.)
 1900 B, p. 247, pl. xxvi, figs. 3-3c; pl. xxxi, figs. 47-49. (*Lamna*.)
 1884 A, p. 229, fig. 131.
Woodward, A. S. 1889 D, p. 393. (*Lamna*.)
Wyman, J. 1850 B, p. 234.
 Cretaceous; Europe, Australia, New Jersey, North Carolina, Mississippi; Tertiary; Virginia, Texas, North Carolina.

Otodus crassus Agassiz.

- Agassiz, L.* 1843 B, iii, p. 271, pl. xxxvi, figs. 29-31.
Gibbes, R. W. 1849 A, p. 200, pl. xxvi, fig. 142.
Kiprijanoff, V. 1854 A, p. 384, pl. ii, figs. 4-20.
Woodward, A. S. 1889 D, p. 400. (*Lamna*.)
 Cretaceous; Europe, Alabama.

Otodus divaricatus Leidy.

- Leidy, J.* 1872 M, p. 162.
Cope, E. D. 1874 C, p. 48.
 1875 E, p. 295.
Leidy 1873 B, pp. 305, 351, pl. xviii, figs. 26-28.
Williston, S. W. 1900 A, p. 37, pl. vi, figs. 1-1b. (*Lamna sulcata*.)
 1900 B, p. 248, pl. xxiv, figs. 1-1b. (*L. sulcata*.)
Woodward, A. S. 1889 D, p. 398. (Syn. of *Lamna sulcata*.)
 Cretaceous; Texas, Kansas.

Otodus levis Gibbes.

- Gibbes, R. W.* 1847 A, p. 268.
 1849 A, p. 199, pl. xxvi, fig. 141.
Woodward, A. S. 1889 D, p. 408. (*Lamna*.)
 Eocene; South Carolina, New Jersey.

Otodus macrotus Agassiz.

- Agassiz, L.* 1843 B, iii, p. 273, pl. xxxii, figs. 29-31.
1843 B, iii, pl. xxxv, figs. 6, 7; pl. xxxvii *a*,
fig. 58 (*Lamna elegans*, in part); p. 290, pl.
xxxvii *a*, figs. 35-42 (*Lamna compressa*).
Dixon, F. 1850 A, p. 204, pl. xi, figs. 20, 21. (*O.*
lanceolatus, not of Agassiz.)
1878 A, p. 249, pl. xi, figs. 20, 21. (*O. lanceolatus*.)
Emmons, E. 1858 B, p. 240.
Gibbes, R. W. 1846 A, p. 42.
1849 A, p. 200, pl. xxvi, figs. 143, 144; p. 197,
pl. xxv, figs. 107-112. (*Lamna compressa*.)
1850 F. (*Lamna compressa*.)
Winckler, T. C. 1874 B, p. 295.
Woodward, A. S. 1889 D, p. 402. (*Lamna*.)
1899 A, p. 9, pl. i, figs. 19, 20.
Wyman, J. 1850 B, p. 233.
Eocene; Europe, New Zealand, South Carolina, Virginia.

Otodus obliquus Agassiz.

- Agassiz, L.* 1843 B, iii, p. 267, pl. xxxi; pl. xxxvi,
figs. 22-27.
1843 B, iii, p. 269, pl. xxxvii, figs. 19-23. (*O.*
lanceolatus.)
Bassani, F., 1899 A, p. 18, pl. i, figs. 32-35. (*Lamna*.)
Clark, W. B. 1895 A, p. 4. (*Lamna?* obliqua.)
1897 A, p. 61. (*Lamna?* obliqua.)
Cope, E. D. 1867 C, p. 142.

- Dames, W. 1883 B, p. 145, pl. iii, fig. 6.
Davis, J. W. 1890 A, p. 407, pl. xli, fig. 13.
Dixon, F. 1850 A, p. 204, pl. x, figs. 32-35; pl. xv,
fig. 11.
1878 A, p. 249, pl. x, figs. 32-35; pl. xv, fig. 11.
Gibbes, R. W. 1846 A, p. 42.
1849 A, p. 199, pl. xxvi, figs. 131-137.
1850 F.
Geinitz, H. B. 1883 A, p. 6, pl. i, figs. 12-18.
Morton, S. G. 1834 A, pl. xi, fig. 1 (*Lamna obliqua*);
fig. 5 (*Lamna lanceolata*, *vide* Agassiz).
1835 A, p. 277. (*Lamna lanceolata*.)
1842 A, p. 220. (*Lamna lanceolata*.)
Noetling, F. 1885 A, p. 84, pl. vi, figs. 4-6. (*Car-*
charodon.)
Woodward, A. S. 1884 A, p. 229. (*Otodus*.)
1889 D, p. 404. (*Lamna?* obliqua.)
1899 A, p. 10.
Wyman, J. 1850 B, p. 234. (*O. obliquus* and *O.*
lanceolatus.)
Upper Cretaceous and Eocene; Europe and
Egypt; Eocene; Virginia, New Jersey; Miocene;
Virginia, North Carolina (*vide* Cope).

Otodus trigonatus Agassiz.

- Agassiz, L.* 1843 B, iii, p. 274, pl. xxxvi, figs. 35-37.
?Gibbes, R. W. 1849 A, p. 200, pl. xxvi, figs. 145, 146.
Woodward, A. S. 1889 D, p. 401. (*Lamna*.)
1899 A, p. 10, pl. i, figs. 23, 24.
Upper Eocene; Bavaria, South Carolina (?).

Isurus Rafinesque. Type *I. oxyrhynchus* Raf. = *Oxyrhina spallanzanii* Bonap.

Rafinesque, C. S. 1810, Caratteri di alcuni nuovi generi, p. 11.

Unless otherwise stated, this genus is referred to by the following writers under the name *Oxyrhina*. This name is antedated by that of Rafinesque, *Isurus*.

- Agassiz, L.* 1843 B (1838), iii, pp. 86, 276, 307
(*Oxyrhina*, type *O. spallanzanii*).
1844 A.
Davis, J. W. 1890 A, pp. 367, 371.
Duméril, A. 1865 A, p. 407.
Eastman, C. R. 1895 A.
Gibbes, R. W. 1849 A, p. 201.
Hasse, C. 1882 A, p. 230, pl. xxxi.
Jordan and Evermann, 1896 A, p. 47. (*Isurus*.)
Köl liker, A. 1863 A, p. 11, figs. 4, 5.
Leidy, J. 1873 B, p. 303.
Müller and Henle, 1837 A, p. 114.
1837 B, p. 397.
1841 A, p. 681.
Nicholson and Lydekker, 1889 A, p. 944.
Pictet, F. J. 1854 A, p. 247.
Pictet and Campiche, 1858 A, p. 83.
Probst, J. 1879 A, p. 128.
Quenstedt, F. A. 1852 A, p. 172.
1885 A, p. 270.
Steinmann and Döderlein, 1890 A, p. 547.
Woodward, A. S. 1884 A, p. 229.
1889 D, p. 376.
Zittel, K. A. 1890 A, p. 81.

Isurus crassus (Agassiz).

- Agassiz, L.* 1843 B, iii, p. 283, pl. xxxvii, fig. 16
(not pl. xxxiv, fig. 14). (*Oxyrhina*.)

- Eastman, C. R. 1895 A, p. 182. (*Oxyrhina*.)
Gemmellaro, G. G. 1857 A, p. 317, pl. i, fig. 11.
(*Oxyrhina*.)
Gibbes, R. W. 1849 A, p. 202, pl. xxvii, figs. 159,
160. (*Oxyrhina*.)
Woodward, A. S. 1889 D, p. 389. (*Oxyrhina*.)
1894 B. (*Oxyrhina*.)
Eocene; South Carolina, Alabama.

Isurus desorii (Agassiz).

- Agassiz, L.* 1843 B, iii, p. 282, pl. xxxvii, figs. 8-13.
(*Oxyrhina*.)
1843 B, iii, p. 282, pl. xxxvii, figs. 3-5. (*Oxy-*
rhina leptodon.)
Bassani, F. 1899 A, p. 13, pl. ii, figs. 24-38. (*Oxy-*
rhina.)
Cope, E. D. 1867 C, p. 142. (*Oxyrhina*.)
1875 V, p. 29. (*Oxyrhina*.)
Eastman, C. R. 1895 A, p. 180. (*Oxyrhina*.)
Emmons, E. 1858 B, p. 236, fig. 67. (*Oxyrhina*.)
Gemmellaro, G. G. 1857 A, p. 314, pl. vi *a*, figs. 9-11
(*O. leptodon*); pl. vi *a*, figs. 12, 13 (*O. desorii*); p.
319, pl. vi *a*, fig. 17 (*Lamna lyellii*).
Gibbes, R. W. 1847 A, p. 267. (*Oxyrhina*.)
1849 A, p. 203, pl. xxvii, figs. 169-171 (*O.*
desorii); p. 203, pl. xxvii, figs. 172, 173
(*O. willsonii*).
1850 F. (*Oxyrhina*.)
Noetling, F. 1885 A, p. 50, pl. iii. (*O. xiphodon*.)
Probst, J. 1879 A, p. 131, pl. ii, figs. 7-13 (*O. desorii*);
p. 141, pl. ii, figs. 69, 75 (*Alopecias gigas*).
Sismonda, E. 1849 A, p. 40, pl. ii, figs. 7-16. (*Oxy-*
rhina.)

Woodward, A. S. 1889 D, p. 382. (Oxyrhina.)

Tertiary; Europe and United States: Eocene; Alabama, North Carolina, South Carolina: Miocene; Maryland (*fide* Cope).

For additional references to descriptions of foreign specimens see Woodward, A. S. 1889 D, pp. 382, 383.

Isurus hastalis (Agassiz).

Agassiz, L. 1843 B, iii, p. 277, pl. xxxiv, excl. figs.

1, 2, 14. (Oxyrhina.)

1843 B, iii, p. 278, pl. xxxiii, figs. 11-17 (O. xiphodon); p. 279, pl. xxxvii, figs. 17, 18 (O. trigonodon); p. 279, pl. xxxvii, figs. 14, 15 (O. plicatilis); p. 281, pl. xxxiii, fig. 10 (O. retroflexa); p. 281, pl. xxxvii, figs. 1, 2 (O. quadrans).

Alessandri, G. de 1896 A, p. 263, pl. i. (Oxyrhina.)

Clarke, W. B. 1895 A, p. 4. (Oxyrhina.)

1897 A, p. 61. (Oxyrhina.)

Cope, E. D. 1867 C, p. 142. (O. hastalis, O. xiphodon.)

1875 H, p. 362. (O. xiphodon.)

Eastman, C. R. 1895 A, p. 178. (Oxyrhina.)

Emmons, E. 1858 B, p. 236, figs. 64-66. (O. xiphodon, O. hastilis.)

Gemmellaro, G. G. 1857 A, p. 312, pl. vi, fig. 5 (O. hastalis); p. 313, pl. vi a, figs. 6-8 (O. xiphodon).

Gibbes, R. W. 1846 A, p. 43 (O. xiphodon, O. hastalis); p. 42 (O. retroflexa).

1849 A, pp. 197, 201, pl. xxvi, figs. 148-152 (O. hastalis); p. 201, pl. xxvii, figs. 153, 154 (O. xiphodon); p. 202, pl. xxxvii, figs. 155-157 (O. plicatilis).

1850 F, p. 70.

Giebel, C. G. 1848 A, p. 357. (Oxyrhina.)

Hitchcock, E., 1835, Geol. Mass., pl. xiii, fig. 37. (No name or description.)

Leidy, J. 1877 A, p. 254. (O. xiphodon.)

Lyell, Chas. 1843 C, p. 32. (Oxyrhina.)

1845 A, p. 415. (Lamna xiphodon.)

Probst, J. 1879 A, p. 129, pl. ii, figs. 1-6 (O. hastalis); p. 132, pl. ii, figs. 14-19 (O. xiphodon).

Quenstedt, F. A. 1885 A, p. 270, fig. 84. (Oxyrhina.)

Sauvage, H. E. 1875 A, p. 633. (O. xiphodon.)

Sismonda, E. 1849 A, p. 40, pl. i, figs. 41-47 (O. hastalis); p. 42, pl. i, figs. 48-50 (O. plicatilis); figs. 51, 52 (O. xiphodon); p. 43, pl. ii, figs. 1-6 (O. isocelica).

Tuomey, M. 1858 A, p. 268. (O. hastata, O. xiphodon.)

Woodward, A. S. 1889 D, p. 385. (Oxyrhina.)

1900 A, p. 4, pl. i, figs. 6-8. (Oxyrhina.)

Wyman, J. 1850 B, p. 234. (O. hastalis, O. xiphodon.)

Tertiary; Europe, Australia, New Zealand, and United States: Eocene; Alabama, South Carolina: Miocene; Virginia, Maryland, South Carolina, North Carolina: Pliocene?; Argentine Republic.

For additional references to foreign specimens see Woodward, A. S. 1889 D, pp. 385, 386, and Eastman, C. R. 1895 A, p. 178.

Isurus mantellii (Agassiz).

Agassiz, L. 1843 B, iii, p. 280, pl. xxxiii, figs. 1-5, 7-9. (Oxyrhina.)

1843 B, iii, p. 292, pl. xxxvii a, fig. 54. (Lamna acuminata.)

Cope, E. D. 1875 E, p. 296. (Oxyrhina extenta.)

Credner, H. 1870 A, p. 242. (Oxyrhina.)

Dana, J. D. 1896 A, p. 843, fig. 1405. (Oxyrhina.)

Davis, J. W. 1890 A, p. 391, pl. xxxix, figs. 1-7. (Oxyrhina.)

Dixon, F. 1850 A, pl. xxx, fig. 24 (O. mantellii); pl. xxx, fig. 19 (Lamna acuminata).

Eastman, C. R. 1895 A, pls. xvi-xviii. (Oxyrhina.)

Fritsch, A. 1878 A, p. 7, fig. 12. (Oxyrhina.)

Geinitz, H. B. 1875 A, p. 207, pl. xxxviii, figs. 1-21.

Gibbes, R. W. 1842 A, p. 43. (Oxyrhina.)

1849 A, p. 197, pl. xxv, figs. 113-115 (Lamna acuminata); p. 202, pl. xxvii, fig. 158 (Oxyrhina).

Giebel, C. G. 1848 A, p. 357. (Oxyrhina.)

Hilgard, E. W. 1860 A, p. 389. (Oxyrhina.)

Leidy, J. 1872 M, p. 162. (Oxyrhina extenta.)

1873 B, pp. 302, 351, pl. xviii, figs. 21-25. (Oxyrhina extenta.)

Morton, S. G. 1834 A, pl. xi, fig. 4. (Lamna mantellii, *fide* Agassiz.)

1835 A, p. 277. (L. mantellii, L. acuminata.)

1842 A, p. 219. (Lamna mantellii and L. acuminata.)

Newberry, J. S. 1876 A, p. 141. (Oxyrhina.)

Quenstedt, F. A. 1852 A, p. 172, pl. xiii, fig. 14. (Oxyrhina.)

1885 A, p. 270, pl. xx, fig. 37. (Oxyrhina.)

Reuss, A. E. 1846 A, p. 5, pl. iii, figs. 1-6. (Oxyrhina.)

Roemer, F. 1849 H, p. 419. (Oxyrhina.)

1852 A, p. 29, pl. i, figs. 6 a, b. (Oxyrhina.)

Sauvage, H. E. 1870 A, p. 21, figs. 39-41 (Oxyrhina); p. 24, figs. 54-56 (Otodus oxyrhinoides).

Williston, S. W. 1900 A, p. 36, pl. xiii, figs. 41-46; pl. xiv, figs. 2-2m. (Oxyrhina.)

1900 B, p. 246, pl. xxxi, figs. 41-46; pl. xxxii, figs. 2-2m.

Woodward, A. S. 1884 A, p. 229, fig. 136. (Oxyrhina.)

1889 D, p. 376. (Oxyrhina.)

Cretaceous; Europe, Alabama, New Jersey, Virginia, Mississippi, Kansas, Texas.

Isurus minutus (Agassiz).

Agassiz, L. 1843 B, iii, p. 285, pl. xxxvi, figs. 39-47. (Oxyrhina.)

Cope, E. D. 1867 C, p. 142. (Oxyrhina.)

1875 H, p. 362. (Oxyrhina.)

1875 V, p. 29. (Oxyrhina.)

Eastman, C. R. 1895 A, p. 182. (Oxyrhina.)

Gemmellaro, G. G. 1857 A, p. 316, pl. via fig. 14. (Oxyrhina.)

Gibbes, R. W. 1849 A, p. 202, pl. xxvii, figs. 161-163; not fig. 164. (Oxyrhina.)

Sismonda, E. 1849 A, p. 44, pl. ii, figs. 36-39.

Woodward, A. S. 1889 D, p. 391. (Oxyrhina.)

Eocene; South Carolina, Maryland, New Jersey, North Carolina: Miocene; North Carolina (*fide* Cope).

It is not improbable that the identification of the American specimens assigned to this species is wrong. See *Carcharhinus gibbesii*.

Isurus planus (Agassiz).

- Agassiz, L. 1856 A, p. 274. (Oxyrhina.)
 1857 A, p. 315, pl. i, figs. 29, 30. (Oxyrhina.)
 Eastman, C. R. 1895 A, p. 183. (Oxyrhina.)
 Woodward, A. S. 1889 D, p. 391. (Oxyrhina.)
 Miocene; California.

Isurus sillimanii (Gibbes).

- Gibbes, R. W. 1847 A, p. 268. (Oxyrhina.)
 Cope, E. D. 1867 C, p. 142. (Oxyrhina.)
 1875 V, p. 29. (Oxyrhina.)
 Eastman, C. R. 1895 A, p. 181. (Oxyrhina.)
 Gibbes, R. W., 1849 A, p. 202, pl. xxvii, figs. 165-168.
 (Oxyrhina.)
 1850 F. (Oxyrhina.)

Woodward, A. S. 1899 D, p. 391. (Oxyrhina.)

Eocene; South Carolina: Miocene; Maryland, North Carolina (*vide* Cope).

Isurus tumulus (Agassiz).

- Agassiz, L. 1856 A, p. 275. (Oxyrhina.)
 1857 A, p. 316, pl. i, figs. 26, 27, 36, 37, 42-44.
 (Oxyrhina.)
 Eastman, C. R. 1895 A, p. 183. (Oxyrhina.)
 Woodward, A. S. 1889 D, p. 391. (Oxyrhina.)
 Miocene; California.

Isurus sp. indet.

- Cope E. D. 1875 E, p. 296.
 1875 F, p. 96.

CARCHARODONTINÆ.

Gill, T. 1893 A, p. 130.

Jordan and Evermann, 1896 A, p. 47.

CARCHARODON A. Smith. Type *Squalus carcharias* Linn.

- Smith, A. in Müller and Henle 1838 A, p. 37.
 Agassiz L., 1843 B. iii, pp. 245, 307.
 1844 A.
 Davis, J. W. 1888 A, p. 8.
 Duméril, A. 1865 A, p. 410.
 Gibbes, R. W. 1848 B, p. 142.
 1849 A, p. 191.
 Günther, A. 1870 A, p. 391.
 1880 A, p. 320.
 Hasse, C. 1882 A, p. 224.
 Haswell, W. A. 1884 A, p. 83.
 Müller & Henle 1841 A, p. 70.
 Kölliker, A. 1863 A, p. 15, figs. 8, 9.
 Nicholson & Lydekker 1889 A, p. 945.
 Parker, T. J. 1887 A.
 Pedroni, P. M. 1844 A, p. 285.
 Pictet, F. J. 1854 A, p. 237.
 Probst, A. 1879 A, p. 137.
 Sismonda, E. 1849 A, p. 33.
 Steinmann & Döderlein 1890 A, p. 548.
 Woodward, A. S. 1884 A, p. 229.
 1889 D, p. 410.
 Zittel, K. A. 1890 A, p. 84.

Carcharodon auriculatus (Blainville).

- Blainville, H. M. D., 1818, Nouv. Dict. d'Hist. Nat.,
 xxvii, p. 384. (Squalus.)
 Agassiz, L. 1843 B. iii, p. 254, pl. xxviii, figs. 17-19
 (C. auriculatus); p. 255, pl. xxviii, figs. 20-25
 (C. angustidens); pl. xxx, fig. 3 (C. lanceolatus,
 C. angustidens in text); p. 256, pl. xxxa, figs. 8, 9
 (C. turgidus); p. 257, pl. xxx, fig. 1 (C. lanceola-
 tus); p. 257, pl. xxxa, fig. 14 (C. toliapicus); p.
 258 pl. xxviii, figs. 11-16 (C. heterodon); p. 258,
 pl. xxviii, figs. 8-10 (C. megalotis); p. 259, pl.
 xxviii, fig. 7 (C. disauris).
 Bassani, F., 1899 A, p. 22 pl. i, figs. 30-39.
 Cope, E. D. 1867 C, p. 142. (C. angustidens.)
 1875 E, p. 295. (C. angustidens.)
 1875 H, p. 362. (C. angustidens.)
 1875 V, p. 29. (C. angustidens.)
 Dana, J. D., 1896 A, p. 901, fig. 1513. (C. angusti-
 dens.)
 Davis, J. W. 1880 A, p. 9, pl. i, figs. 4-6; pl. iv, fig.
 22. (C. angustidens.)

- Dixon, F. 1850 A, p. 204, pl. xi, fig. 19. (C. hetero-
 don.)
 1858 A, p. 249, pl. xi, fig. 19. (C. heterodon.)
 Emmons, E. 1858 B, p. 231, fig. 57; p. 233. (C. cras-
 sidens, Emmons, *non* Sismonda.)
 Gemmellaro, G. G. 1857 A, p. 304, pl. v, figs. 6a-8.
 (C. angustidens and var. turgidus.)
 Gibbes, R. W. 1846 A, p. 42. (C. auriculatus, angus-
 tidens, heterodon, megalotis, lanceolatus, semi-
 serratus, turgidus.)
 1847 A, p. 267. (C. acutidens.)
 1848 B, pp. 145, 146, pls. xix-xxi, figs. 10-38.
 (C. angustidens, with varieties auriculatus,
 heterodon, megalotis, lanceolatus,
 semiserratus, toliapicus, and turgidus.)
 1848 B, p. 146, pl. xxi, figs. 39-44. (C. acuti-
 dens.)
 1850 F. (C. acutidens, angustidens.)
 Giebel, C. G. 1848 A, p. 350 (C. angustidens, C. auri-
 culatus); p. 351 (C. heterodon, lanceolatus,
 toliapicus, turgidus).
 Hilgard, E. W. 1860 A, pp. 132, 142. (C. angusti-
 dens.)
 Leidy, J. 1876 A, p. 222. (C. angustidens.)
 1876 E. (C. angustidens.)
 1877 A, p. 253. (C. angustidens.)
 Morton, S. G. 1834 A, pl. xii, figs. 3, 4, 5. (Carcharias
 lanceolatus and C. megalotis, *vide* Agassiz.)
 1835 A, p. 277. (C. megalotis.)
 1842 A, p. 220. (Carcharias myalotis.)
 Noetling, F. 1885 A, p. 82, pl. vi, figs. 1-3. (C. an-
 gustidens.)
 Pedroni, P. M. 1844, A, p. 285.
 Röse, C. 1897 A, p. 35, figs. 5, 6. (C. angustidens.)
 Tuomey, M. 1858 A, p. 268. (Carcharias angusti-
 dens, auriculatus, heterodon.)
 Wailes, B. L. C. 1854 A, p. 277. (C. angustidens.)
 Woodward, A. S. 1884 A, p. 229, fig. 141. (C. auri-
 culatus.)
 1889 D, p. 411. (C. auriculatus.)

Wyman, J. 1850 B, p. 234. (C. angustidens.)
 Tertiary; Europe, North Africa, Arabia, Victoria,
 New Zealand, North America: Eocene; Alabama,
 Mississippi, North Carolina, South Carolina: Miocene; Maryland, Virginia.

Carcharodon carcharias (Linn.).

Linnæus, 1758, Syst. Nat., ed. x, p. 235. (*Squalus carcharias*.)

Agassiz, L. 1843 B, i, p. 254, pl. xxxa, figs. 5-7. (*C. sulcidens*.)

Davis, J. W. 1890 A, p. 410, pl. xli, fig. 14. (*C. rondeletii*.)

Duméril, A. 1865 A, p. 411, pl. vii, fig. 7.

Emmons, E. 1858 B, p. 230, figs. 55, 56. (*C. sulcidens*.)

Gibbes, R. W. 1846 A, p. 42. (*C. sulcidens*.)

1848 A, p. 350. (*C. sulcidens*.)

1848 B, p. 147, pl. xxi, figs. 52, 53. (*C. sulcidens*.)

Giebel, C. G. 1848 A, p. 350. (*C. sulcidens*.)

Günther, A. 1880 A, p. 320, fig. 114. (*C. rondeletii*.)

Hasse, C. 1882 A, p. 228, pl. xxxi. (*C. rondeletii*.)

Jordan and Evermann 1896 A, p. 50. (*C. carcharias*.)

Kölliker, A. 1863 A, p. 15. (*C. rondeletii*.)

Müller and Henle, 1841 A, p. 70. (*C. rondeletii*.)

Stevenson, W. B. 1884 A, with 1 plate and 1 woodcut.

Woodward, A. S. 1884 A, p. 230. (*C. sulcidens*.)

1889 D, p. 420. (*C. rondeletii*.)

Recent in all temperate and tropical seas:

Pliocene; Europe: Miocene and Eocene; South Carolina. North Carolina.

Carcharodon contortidens Emmons.

Emmons, E. 1858 B, p. 233, fig. 60.

Doubtful species.

Eocene; North Carolina.

Carcharodon lanciformis Gibbes.

Gibbes, R. W. 1847 A, p. 267.

1848 B, p. 146, pl. xxi, figs. 46-51.

1850 F.

Leidy, J. 1877 A, p. 254.

Woodward, A. S. 1889 D, p. 411.

Phosphate beds; South Carolina.

Carcharodon leptodon Agassiz.

Agassiz, L. 1843 B, iii, p. 259, pl. xxviii, figs. 1-6.

?Gibbes, R. W. 1846 A, p. 42.

?1850 G, p. 300, pl. xlii, figs. 7-9.

Woodward, A. S. 1889 D, p. 421.

Eocene; South Carolina.

The identification of the South Carolina specimens with Agassiz's *C. leptodon* is doubtful.

Carcharodon megalodon Agassiz.

Agassiz, L., in Charlesworth, E. 1837 A, with woodcut.

1843 B, iii, p. 247, pl. xxix (*C. megalodon*); p. 250, pl. xxxa, fig. 10 (*C. rectidens*); 251, pl. xxxa, figs. 11-13 (*C. subauriculatus*); p. 251, pl. xxx, figs. 2, 4, 6, 7, 8 (*C. productus*); p. 253, pl. xxx, figs. 9-12 (*C. polygyrus*).

Bowerbank, J. S. 1852 A. (*Carcharias megalodon*.)

1852 B.

Clark, W. B. 1895 A, p. 4. (*C. polygyrus*.)

1897 A, p. 61. (*C. polygyrus*.)

Cope, E. D. 1867 C, p. 142.

1875 H, p. 362.

1875 V, p. 29.

Davis, J. W. 1888 A, p. 12, pl. ii, figs. 1-3.

DeKay, J. E. 1842 B, p. 386. (*Carcharias polygyrus*)

Emmons, E. 1858 B, p. 227, figs. 50, 51; p. 229, figs.

52-54 (*C. ferox*); p. 232, fig. 59 (*C. triangularis*).

Gemmellaro, G. G. 1857 A, p. 299, pl. ii, figs. 3a-3c:

pl. iii, figs. 1a, 2a, 3a; pl. iv, figs. 1a-3a (*C. megalodon*); p. 307, pl. iv, fig. 4 (*C. latissimus*); p. 306

pl. v, figs. 3-5 (*C. productus*).

Gibbes, R. W. 1846 A, p. 41 (*C. megalodon*, rec-

tidens); p. 42 (*C. polygyrus*, *productus*, *mortoni*).

1847 A, p. 266. (*C. mortoni*.)

1848 B, p. 143, pls. xviii, xix, figs. 1-9 (*C. megalodon*); p. 146, pl. xxi, fig. 45 (*C. mortoni*).

1850 F.

Giebel, C. G. 1848 A, p. 348 (*C. megalodon*); p. 349

(*C. productus*, *rectidens*); p. 350 (*C. auriculatus*,

polygyrus).

Hilgard, E. W. 1860 A, p. 142.

Leidy, J. 1876 A, p. 222.

1876 E.

1876 F.

1877 A, p. 253.

Lucas, F. A. 1892 A, p. 151.

Lyell, C. 1843 C, p. 32. (*Carcharias*.)

1845 A, p. 415. (*C. megalodon*, *productus*).

Morton, S. G. 1834 A, pl. xii, fig. 2. (*Carcharias*

polygyrus, *forte* Agassiz.)

1835 A, p. 277. (*Carcharias polygyrus*.)

1842 A, p. 220. (*Carcharias polygyrus*.)

Pedroni, P. M. 1844 A, p. 286, pl. i, figs. 24, 25.

Pictet, F. J. 1854 A, p. 238.

Probst, J. 1879 A, p. 138.

Quenstedt, F. A. 1852 A, p. 169. (*Carcharias ve-*

rus.)

1885 A, p. 206, fig. 82. (*Carcharias verus*.)

Sismonda, E. 1849 A, p. 34, pl. i, figs. 8-13 (*C. megalodon*); p. 35, pl. i, figs. 32, 33 (*C. crassidens*); p.

37, pl. i, figs. 25-29 (*C. productus*).

Tuomey, M. 1858 A, p. 268. (*Carcharias polygyrus*, *productus*.)

Waites, B. L. C. 1854 A, p. 276.

Woodward, A. S. 1884 A, p. 229.

1889 D, p. 415 (*C. megalodon*); p. 422 (*C. mortoni*).

1900 A, p. 4, pl. i, fig. 9.

Zittel, K. A. 1890 A, p. 84, fig. 87.

Tertiary; Europe, Arabia, East Indies, West Indies, North and South America, Central America, Australia, New Zealand; Eocene and phosphate beds; South Carolina, Alabama, Mississippi, Maryland, Massachusetts, North Carolina, Virginia; Pliocene; Argentine Republic.

Carcharodon rectus Agassiz.

Agassiz, L. 1856 A, p. 274.

1857 A, p. 315, pl. i, figs. 39-41.

Bowers, S. 1889 A.

Woodward, A. S. 1889 D, p. 422.

Miocene; California.

CORAX Agassiz. Type *Galeus pristodontus* Agassiz.

- Agassiz, L.* 1843 B, iii, p. 224.
Davis, J. W. 1890 A, pp. 367, 411.
Kiprijanoff, V. 1853 A, p. 290.
Pictet, F. J. 1854 A, p. 240.
Pictet and Campiche 1858 A, p. 79.
Priem, F. 1897 A, p. 47.
Reuss, A. E. 1846 A, p. 3.
Williston, S. W. 1900 A, p. 41.
 1900 B, p. 252.
Woodward, A. S. 1884 A, p. 227.
 1889 D, p. 422.
Zittel, K. A. 1890 A, p. 84.

Corax affinis Agassiz.

- Agassiz, L.* 1843 B, iii, p. 227, pl. xxvi, fig. 2 (C. affinis); pl. xxvii, figs. 21-24. (C. appendiculatus.)
 1843 B, iii, p. 229, pl. xxvii, figs. 51, 57. (C. planus.)
Giebel, C. G. 1848 A, p. 349. (Carcharodon minor.)
Hébert, E. 1855 C, p. 354, pl. xxvii, fig. 9. (Sphyrna plana.)
Woodward, A. S. 1889 D, pp. 427, 428.
 Upper Cretaceous; Europe. A specimen in the Ennskillen collection from the Eocene of Alabama may belong to this species.

Corax curvatus Willist.

- Williston, S. W.* 1900 A, p. 41, pl. xii, figs. 7, 8.
 1900 B, p. 253, pl. xxx, figs. 7, 8.
 Cretaceous (Benton); Kansas.

Corax falcatus Agassiz.

- Agassiz, L.* 1843 B, iii, p. 226, pl. xxvi, fig. 14; pl. xxvii, figs. 1-15. (On pl. xxvi as *Galeus pristodontus*.)
Cope, E. D. 1875 E, p. 295. (Galeocерdo.)
Credner, H. 1870 A, p. 242. (Heterodon.)
Dana, J. D. 1896 A, p. 843, fig. 1403. (C. heterodon.)
Dixon, F. 1850 A, pl. xxx, fig. 18.
Fritsch, A. 1878 A, p. 11, figs. 23, 24. (C. heterodon.)
Geinitz, H. B. 1839 A, p. 11, pl. i, fig. 1 (*Galeus pristodontus*); p. 11, pl. i, fig. 2. (G. appendiculatus.)
 1875 A, p. 210, pl. xl, figs. 2-15. (C. heterodon.)
Giebel, C. G. 1848 A, p. 370. (C. heterodon.)
Hébert, E. 1855 C, p. 354, pl. xxvii, fig. 9. (Sphyrna plana.)
Kiprijanoff, V. 1853 A, p. 293, pl. ii, figs. 1a-1e. (C. heterodon.)
 1854 A, p. 293, pl. ii. (C. heterodon.)

- Leidy, J.* 1873 B, pp. 301, 351, pl. xviii, figs. 29-43.
Pictet and Campiche 1858 A, p. 80, pl. x, figs. 1, 2.
Osborn, Scott and Speir 1878 A, p. 105. (Galeocерdo.)
Reuss, A. E. 1846 A, p. 3, pl. iii, figs. 49-71 (C. heterodon); p. 4, pl. iv, fig. 1-3 (C. obliquus).
Roemer, F. 1849 A, p. 419. (C. heterodon.)
 1852 A, p. 30, pl. i, fig. 8. (C. heterodon.)
Sauvage, H. E. 1870 A, p. 40, pl. ii, figs. 84, 85.
Tuomey, M. 1858 A, p. 261.
Williston, S. W. 1900 A, p. 41, pl. xiii, figs. 1-40, pl. xiv, figs. 1-11.
 1900 B, p. 252, pl. xxxi, figs. 1-40; pl. xxxii, figs. 1-11.
Woodward, A. S. 1884 A, p. 227, fig. 134.
 1889 D, p. 424.
 Cretaceous; Europe, Alabama, Mississippi, Texas, Kansas, Colorado, New Jersey.

Corax pristodontus Agassiz.

- Agassiz, L.* 1843 B, iii, p. 224, pl. xxvi, figs. 9-13. (On plate as *Galeus pristodontus*.)
 In *Morton, S. G.* 1835 A, p. 277. (*Galeus pristodontus*; no description.)
 1843 B, iii, p. 225, pl. xxvi, figs. 4-8; pl. xxvi a, figs. 25-34. (C. kaupii.)
Cope, E. D. 1867 C, p. 141. (Galeocерdo appendiculatus; reference uncertain as to species.)
 1875 E, p. 295. (Galeocерdo.)
 1877 K, pp. 11, 38. (Galeocерdo.)
De Kay, J. E. 1842 B, p. 387. (Galeus.)
Emmons, E. 1858 B, p. 238, fig. 69. (Galeocерdo.)
Gibbes, R. W. 1816 A, p. 42.
 1849 A, p. 192, pl. xxv, fig. 70. (Galeocерdo.)
 1850 F. (Galeocерdo.)
Giebel, C. G. 1848 A, p. 370.
Harlan, R. 1835 B, p. 292. (Squalus.)
Hébert, E. 1855 C, p. 353, pl. xxvii, fig. 8.
Morton, S. G. 1834 A, pl. xi, fig. 6. (No description.)
 1842 A, p. 219. (Galeus.)
Pictet, F. J. 1854 A, p. 240.
Priem, F. 1897 A, p. 45, pl. i, figs. 18, 19.
 1898 A, p. 236, pl. ii, fig. 5.
Spillman, W., in *Hilgard, E. W.* 1860 A, p. 389. (C. appendiculatus.)
Tuomey, M. 1858 A, p. 261. (Galeus.)
Woodward, A. S. 1884 A, p. 227, fig. 132.
 1888 I, p. 293.
 1889 D, p. 423.
Zittel, K. A. 1890 A, p. 84, fig. 88.
 Upper Cretaceous; Europe, India, Africa, New Jersey; Eocene; Alabama, Mississippi, South Carolina; Miocene; Virginia.

XENODOLAMIA Leidy. Type *X. pravus* Leidy.

- Leidy, J.* 1877 A, p. 251.
Woodward, A. S. 1889 D, p. 429.

Xenodolamia pravus Leidy.

- Leidy, J.* 1877 A, p. 251, pl. xxxiv, figs. 33, 34.
Woodward, A. S. 1889 D, p. 429.
 Phosphate beds; South Carolina.

Xenodolamia simplex Leidy.

- Leidy, J.* 1877 A, p. 251, pl. xxxiv, figs. 35, 36.
Woodward, A. S. 1889 D, p. 429.
 Phosphate beds; South Carolina.

SCYLLIORHINIDÆ.

- Gill, T. 1862 A, p. 406. (Scylliorhinoidæ.)
 Duméril, A. 1865 A, p. 312. (Scyllia.)
 Gegenbaur, C. 1865 B. (Scylliidae.)
 Günther, A. 1870 A, p. 400. (Scylliidae.)
 1880 A, p. 325. (Scylliidae.)
 Hasse, C. 1878 A. (Scyllia.)
 1879 A, p. 52. (Scyllia.)
 1882 A, p. 242. (Scyllia.)
 Haswell, W. A. 1884 A, p. 115. (Scylliidae.)
 Jaekel, O. 1890 A, p. 94. (Scylliidae.)
 1894 A, p. 159. (Scylliidae.)

- Jordan and Evermann 1896 A, p. 22 (Scylliorhinidae); p. 25 (Ginglymostomidae).
 Kolliker, A. 1863 A, p. 27. (Scyllium.)
 Mayer, P. 1886 A, p. 274. (Scylliidae.)
 Müller and Henle 1841 A, p. 3. (Scyllia.)
 Probst, J. 1879 A, p. 169. (Scylliidae.)
 Woodward, A. S. 1889 D, p. 338.
 Zittel, K. A. 1890 A (1887), p. 79. (Scylliidae.)

SCYLLIORHININÆ.

Gill, T. 1862 A, p. 407.

SCYLLIORHINUS Blainville.

Type *S. canicula* Cuvier.

- Blainville, H. M. D., 1816, Jour. de Physique, p. 263.
 Cuvier, 1817, Règne Anim., ii, p. 124. (Scyllium.)
 Günther, A. 1870 A, p. 400. (Scyllium.)
 Jordan and Evermann 1896 A, p. 22.
 Woodward, A. S. 1889 D, p. 340. (Scyllium.)

Scylliorhinus? gracilis Willist.

- Williston, S. W. 1900 A, p. 35, pl. vi, fig. 6. [Scyllium (Lamna?).]
 1900 B, p. 245, pl. xxiv, fig. 6. [(Scyl. Lamna).]
 Cretaceous (Greenleaf sandstone); Kansas.

Scylliorhinus planidens Willist.

- Williston, S. W. 1900 A, p. 35, pl. vi, fig. 7. (Scyllium.)
 1900 B, p. 245, pl. xxiv, fig. 7.
 Cretaceous (Greenleaf sandstone); Kansas.

Scylliorhinus rugosus Willist.

- Williston, S. W. 1900 A, p. 35, pl. vi, fig. 5. (Scyllium.)
 1900 B, p. 245, pl. xxiv, fig. 5.
 Cretaceous (Greenleaf sandstone); Kansas.

GINGLYMOSTOMINÆ.

- Gill, T. 1890 A, p. 130. (Ginglymostominæ.)
 1862 A, p. 406. (Ginglymostomoidæ.)
 Günther, A. 1870 A, p. 407. (Scylliidae, in part.)
 Hasse, C. 1879 A, p. 51. (Scylliolamnidae, in part.)
 1882 A, p. 193. (Scylliolamnidae, in part.)

- Jordan and Evermann, 1896 A, p. 25. (Ginglymostomidae.)

GINGLYMOSTOMA Müller and Henle. Type *Squalus cirratus* Gmelin.

- Müller and Henle, 1837 B, p. 396.
 Duméril, A. 1865 A, p. 333.
 Günther, A. 1870 A, p. 407.
 1880 A, p. 326.
 Hasse, C. 1879 A, p. 71.
 1882 A, pp. 201, 203, pl. xxv.
 Klunzinger, C. B. 1871 A, p. 670.
 Kolliker, A. 1863 A, p. 5, fig. 1.
 Leidy J. 1877 A, p. 250. (Aerodobatis, type A. serra.)
 Müller and Henle, 1838 A, p. 35.
 1841 A, p. 22.
 Woodward, A. S. 1889 D, p. 348.
 Zittel, K. A. 1890 A, p. 80.

Ginglymostoma obliquum (Leidy).

- Leidy, J. 1877 A, p. 250, pl. xxxiv, fig. 14. (Aerodobatis.)
 Woodward, A. S. 1889 D, p. 348. (G. serra?)
 Eocene; New Jersey.

Ginglymostoma serra (Leidy).

- Leidy, J. 1877 A, p. 250, pl. xxxiv, figs. 10-13. (Aerodobatis.)
 Woodward, A. S. 1889 D, p. 348.
 Eocene; South Carolina.

GALEIDÆ.

- Duméril, A. 1865 A, p. 388. (Galei.)
 Gegenbaur, C. 1865 B. (Carchariidae.)
 Gill, T. 1862 A, p. 399. (Galeorhinoidæ.)
 Günther, A. 1870 A, p. 353. (Carchariidae.)
 1880 A, p. 316. (Carchariidae.)
 1881 A, p. 685. (Carchariidae.)
 Hasse, C. 1882 A, p. 256 ("Fam. Hemigaleus"); p. 268 (Carchariidae.)
 Jaekel, O. 1894 A, p. 156. (Carchariidae.)

- Jordan and Evermann 1896 A, p. 27. (Galeidae.)
 Mayer, P. 1886 A, p. 275. (Carchariidae.)
 Müller and Henle 1841 A, p. 7 (Carchariæ); p. 57 (Galei).
 Steinmann and Döderlein 1890 A, p. 546. (Carchariidae.)
 Woodward, A. S. 1884 A, p. 227 (Carchariidae); 1889 D, p. 435 (Carchariidae).
 Zittel, K. A. 1890 A, p. 85. (Carchariidae.)

GALEORHININÆ.

Gill, T. 1862 A, pp. 399, 401.

Günther, A. 1870 A, p. 353. (Carcharina, in part.)

Jordan and Evermann 1896 A, p. 27.

GALEOCERDO Müller and Henle. Type *G. tigrinus* M. and H.

Müller and Henle 1838 A, p. 36.

Agassiz, L. 1843 B, iii, pp. 230, 304.

Davis, J. W. 1888 A, p. 7.

Duméril, A. 1865 A, p. 393.

Gibbes, R. W. 1849 A, p. 191.

Gill, T. 1862 A, p. 400.

Günther, A. 1870 A, p. 377.

1880 A, p. 317.

Hassé, C. 1882 A, p. 259, pls. xxxvi, xxxvii.

Jaekel, O. 1894 A, p. 164.

Jordan and Evermann 1896 A, p. 32.

Klunzinger, C. B. 1871 A, p. 663.

Müller and Henle 1837 A, p. 114.

1841 A, p. 59.

Pedroni, P. M. 1844 A, p. 282.

Pictet, F. J. 1854 A, p. 241.

Steinmann and Döderlein 1890 A, p. 548.

Woodward, A. S. 1884 A, p. 227.

1889 D, p. 443.

Zittel, K. A. 1890 A, p. 85.

Galeocerdo aduncus Agassiz.

Agassiz, L. 1843 B, iii, p. 231, pl. xxvi, figs. 24-28.

Cope, E. D. 1867 C, p. 141.

1875 H, p. 362.

1875 V, p. 29.

1877 K, p. 38.

Emmons, E. 1858 B, p. 237.

Gibbes, R. W. 1849 A, p. 191, pl. xxv, figs. 54-58.

1850 F.

Giebel, C. G. 1848 A, p. 369.

Leidy, J. 1877 A, p. 254.

Pedroni, P. M. 1844 A, p. 283, pl. i, figs. 12, 13.

Pictet, F. J. 1854 A, pp. 241, 242.

Quenstedt, F. A. 1852 A, p. 168, pl. xiii, fig. 2 (Galeus).

1885 A, p. 264, pl. xx, fig. 8 (Galeus).

Tuomey, M. 1858 A, p. 268 (Galeus).

Woodward, A. S. 1889 D, p. 444.

1900 A, p. 5, pl. i, figs. 10, 10a.

Zittel, K. A. 1890 A, p. 85, fig. 90.

Tertiary; Europe: Eocene; North Carolina, South Carolina, Alabama: Miocene; Maryland.

Galeocerdo contortus Gibbes.

Gibbes, R. W. 1849 A, p. 193, pl. xxv, fig. 71-74.

Clark, W. B. 1895 A, p. 4.

1897 A, p. 62.

Cope, E. D. 1867 C, p. 141.

1875 V, p. 29.

Emmons, E. 1858 B, additions and corrections to p. 241, figs. 82a, 83a.

Gibbes, R. W. 1850 F.

Jaekel, O. 1898 C, p. 165 (var. *hassiae*).

Leidy, J. 1877 A, p. 254.

Pictet, F. J. 1854 A, p. 242.

Woodward, A. S. 1889 D, p. 443.

Wyman, J. 1850 B, p. 234.

Eocene; North Carolina, South Carolina, Alabama: Miocene; Virginia and Maryland. Variety *hassiae* in Germany.

Galeocerdo crassidens Cope.

Cope, E. D. 1872 I, p. 355.

1875 E, pp. 243, 395.

Williston, S. W. 1900 A, p. 41. (Syn. ? of *Corax falcatus*.)

Woodward, A. S. 1889 D, p. 447.

Cretaceous (Niobrara); Kansas.

Galeocerdo hartwellii Cope.

Cope, E. D. 1872 I, p. 355.

1875 E, pp. 244, 295. (G. *hartwellii*.)

Osborn, Scott and Speir, 1878 A, p. 105.

Williston, S. W. 1900 A, p. 41. (Syn. ? of *Corax falcatus*.)

1900 B, p. 252, pl. xxxi, fig. 23. (*Corax hartwellii*; syn. of *C. falcatus*.)

Woodward, A. S. 1889 D, p. 447.

Cretaceous (Niobrara); Kansas, Colorado.

Galeocerdo lævissimus Cope.

Cope, E. D. 1867 C, p. 141.

Miocene; Maryland.

Galeocerdo latidens Agassiz.

Agassiz, L. 1843 B, iii, p. 231, pl. xxvi, figs. 22, 23; (? figs. 20, 21.)

Cope, E. D. 1867 C, p. 141.

1875 V, p. 29.

Dames, W., 1883 B, p. 142.

Dixon, F. 1850 A, p. 202, pl. xi, figs. 22, 23.

1878 A, p. 248, pl. xi, figs. 22, 23.

? Emmons, E. 1858 B, p. 239, fig. 68.

Gibbes, R. W. 1846 A, p. 42.

1849 A, p. 192, pl. xxv, figs. 59-62.

1850 F.

Giebel, C. G. 1848 A, p. 369.

Hilgard, E. W. 1860 A, p. 142.

Tuomey, M. 1858 A, p. 268. (Galeus.)

Woodward, A. S. 1889 D, p. 444.

Tertiary; Europe and North Africa: Eocene; North Carolina, South Carolina, Alabama, and Mississippi: Miocene; Maryland.

Galeocerdo minor Agassiz.

Agassiz, L. 1843 B, iii, p. 232, pl. xxvi, figs. 15-19 (? figs. 20, 21); pl. xxvii, figs. 64-66.

Giebel, C. G. 1848 A, p. 369.

Molin, R. 1860, Sitzungsber. Akad. Wiss. Berlin, xl, p. 583. (Protogaleus.)

Winckler, 1874 B, p. 296, pl. vii, fig. 1. (G. *recticonus*.)

Woodward, A. S. 1889 D, p. 446. (*Galeocerdo* ? *minor*.)

Tertiary; Europe: Eocene; Alabama. (Woodward.)

Galeocерdo productus Agassiz.

Agassiz, L. 1856 A, p. 273.

1857 A, p. 314, pl. i, figs. 1-6.

Woodward, A. S. 1889 D, p. 448.

Miocene; California.

Galeocерdo subcrenatus Emmons.

Emmons, E. 1858 B, p. 238.

A doubtful species, without indicated formation; North Carolina.

Galeocерdo sp. indet.

Woodward, A. S. 1889 D, p. 456.

Eocene; South Carolina.

GALEORHINUS Blainville.

Blainville, H. M. D. 1816, Bull. Sci. Philom., p. 121.

Cuvier G. 1817 Règne Anim., ed. i, p. 117. (Galeus, with *Squalus galeus* as type.)

Gegenbaur, C. 1872 A, pl. ii, fig. 2; pl. v, fig. 2; pl. viii, fig. 3; pl. xii, fig. 2; pl. xvii, fig. 2; pl. xix, fig. 4. (Galeus.)

Gill, T. 1862 A, p. 402.

1864, Proc. Acad. Nat. Sci. Phila., p. 148. (Eugaleus, type *Squalus galeus*.)

Günther, A. 1870 A, p. 379. (Galeus.)

1880 A, p. 318. (Galeus.)

Type *Squalus galeus* Linn.

Hasse, C. 1882 A, p. 263, pl. xxxviii. (Galeus.)

Jaekel, O. 1894 A, p. 166. (Galeus.)

Jordan and Evermann, 1896 A, p. 31. (Galeorhinus.)

Müller and Henle, 1841 A, p. 57. (Galeus.)

Woodward, A. S. 1889 D, p. 452. (Galeus.)

Zittel, K. A. 1890 A, p. 85. (Galeus.)

Galeorhinus sp. indet.

Woodward, A. S. 1889 D, p. 456. (Galeus.)

Eocene; Alabama.

CARCHARHININÆ.

Duméril, A. 1865 A, p. 340. (Carchariæ.)

Günther, A. 1870 A, p. 353. (Carchariina, in part.)

Jordan and Evermann, 1896 A, p. 28.

CARCHARHINUS Blainville. Type *C. commersoni* = *C. lamia* (Raf.).

Blainville, H. M. D. 1816, Jour. de Physique, p. 284.

Agassiz, L. 1843 B, iii, p. 240, 302, 366. (Carcharias.)

Cuvier, G. 1817 Règne Anim., ed. i, p. 125. (Carcharias, type *C. lamia*.)

Duméril, A. 1865 A, p. 343. (Carcharias.)

Gill, T. 1862 A, p. 401. (Eulamia, type *C. lamia*.)

Günther, A. 1880 A, p. 318. (Carcharias.)

Hasse, C. 1882 A, p. 268, pl. xxxix. (Carcharias.)

Jaekel, O. 1894 A, p. 157. (Carcharias.)

Jordan and Evermann 1896 A, p. 33. (Carcharhinus.)

Klunzinger, C. B. 1871 A, p. 655. (Carcharias.)

Müller and Henle 1837 A, p. 114. (Carcharias.)

1841 A, p. 27. (Carcharias.)

Quenstedt, F. A. 1852 A, p. 169. (Carcharias.)

1885 A, pp. 265, 272. (Carcharias.)

Steinmann and Döderlein 1890 A, p. 548. (Carcharias.)

Woodward, A. S. 1889 D, p. 435. (Carcharias.)

Zittel, K. A. 1890 A, (1887) p. 86. (Carcharias.)

Subgenus APRIONODON Gill.

Gill, T. 1862 A, p. 411. (For Aprion of Müller and Henle, preoccupied.)

Duméril, A. 1865 A, p. 348.

Günther A. 1870 A, p. 361. (Aprion.)

Jaekel, O. 1894 A, p. 162. (Aprion.)

Jordan and Evermann 1896 A, p. 42.

Müller and Henle 1841 A, p. 31. (Aprion.)

Probst, J. 1878 A, p. 121. (Aprion.)

Woodward, A. S. 1889 D, p. 437.

Zittel, K. A. 1890 A, p. 86.

Subgenus PRIONACE Cantor.

Cantor, T. E. 1850 Malayan Fishes, p. 399. (For Prionodon of Müller and Henle, preoccupied.)

Agassiz, L. 1843 B, iii, p. 243. (Glyphis.)

Duméril, A. 1865 A, p. 351. (Prionodon.)

Gegenbaur, C. 1872 A, pl. ii, fig. 4; pl. v, fig. 3; pl. viii, fig. 4; pl. xviii, fig. 5. (Prionodon.)

Gibbes, R. W. 1849 A, p. 194. (Glyphis.)

Günther, A. 1870 A, p. 363. (Prionodon.)

Hasse, C. 1882 A, p. 271, pl. xxxix. (Prionodon.)

Jaekel, O. 1894 A, p. 162. (Prionodon.)

Jordan and Evermann 1896 A, p. 33.

Müller and Henle 1841 A, p. 35. (Prionodon.)

Pictet, F. J. 1854 A, p. 236. (Glyphis.)

Probst, J. 1878 A, p. 124. (Prionodon.)

Woodward, A. S. 1889 D, p. 439. (Prionodon.)

Zittel, K. A. 1890 A, p. 86. (Prionodon.)

Carcharhinus (Prionace) antiquus (Agassiz).

Agassiz, L. 1856 A, p. 273. [Carcharias (Prionodon).]

1857 A, p. 314, pl. i, figs. 15, 16. [Carcharias (Prionodon).]

Woodward, A. S. 1889 D, p. 441. [Carcharias (Prionodon).]

Miocene; California

Carcharhinus (Prionace) egertoni (Agassiz).

Agassiz, L. 1843 B, iii, p. 228, pl. xxxvi, figs. 6, 7. (Corax egertoni.)

- Cope, E. D. 1867 C, p. 141. (*Galeocerdo*.)
 1875 F, p. 63. (*Galeocerdo*.)
 1875 H, p. 362. (*Galeocerdo*.)
 1875 V, p. 29. (*Galeocerdo*.)
- Emmons, E. 1858 B, additions and corrections to p. 242, fig. 90. (*Galeocerdo*.)
- Gibbes, R. W. 1847 A, p. 268. (*Glyphis subulata*.)
 1849 A, p. 192, pl. xxv, figs. 66-69 (*Galeocerdo egertoni*); p. 194, pl. xxv, figs. 86, 87 (*Glyphis subulata*.)
 1850 F. (*Glyphis subulata*.)
- Giebel, C. G. 1848 A, p. 371. (*Carcharias*.)
- Woodward, A. S. 1889 D, p. 439. [*Carcharias* (*Prionodon*).]
- Wyman, J. 1850 B, p. 234. (*Galeocerdo egertoni*, *Glyphis subulata*.)
 Eocene; South Carolina: Miocene; Maryland, North Carolina.

Carcharhinus (*Aprionodon*) gibbesii (Woodward).

- Woodward, A. S. 1889 D, p. 437. [*Carcharias* (*Aprionodon*).]
- ?Cope, E. D. 1867 C, p. 142. (*Oxyrhina minuta*.)
- Eastman, C. R. 1895 A, p. 182. (*Carcharias*.)

MICRODUS Emmons. Type *M. laevis* Emmons.

Emmons, E. 1857 A, p. 48.

It is doubtful what disposition is to be made of the tooth described by Emmons under the name *Microdus laevis*.

HEMIPRISTIS Agassiz. Type *H. serra* Agassiz.

- Agassiz, L. 1843 B, iii, pp. 237, 303.
- Gibbes, R. W. 1849 A, p. 193.
- Jaekel, O. 1894 A, p. 168.
- Kiprijanoff, V. 1854 A, p. 373.
- Klunzinger, C. B. 1871 A, p. 664. (*Dirrhizodon*, type *D. elongatus*.)
- Pedroni, P. M. 1844 A, p. 284.
- Pictet, F. J. 1854 A, p. 242.
- Probst, J. 1878 A, p. 141.
- Quenstedt, F. A. 1852 A, p. 168.
 1885 A, p. 265.
- Sismonda, E. 1849 A, p. 32.
- Woodward, A. S. 1889 D, p. 448.
- Zittel, K. A. 1890 A, p. 85.

Hemipristis heteropleurus Agassiz.

- Agassiz, L. 1856 A, p. 274.
 1857 A, p. 315, pl. i, fig. 14.
 Miocene; California.

Hemipristis serra Agassiz.

- Agassiz, L. 1843 B, iii, p. 237, pl. xxvii, figs. 18-30.
 1843 B, iii, p. 238, pl. xxvii, figs. 31-33. (*H. paucidens*.)
- Cope, E. D. 1867 C, p. 142.
 1875 H, p. 362.
 1875 V, p. 29.
- Emmons, E. 1858 B, p. 235, fig. 63. (*H. crenulatus*.)
- Gemmellaro, G. G. 1857 A, p. 296, pl. i, fig. 6a.

- Gibbes, R. W. 1846 A, p. 42. (*Galeocerdo minor*, not of Agassiz.)
 1849 A, p. 192, pl. xxv, figs. 63-65 (*G. minor*)? p. 202, pl. xxvii, fig. 164 (*Oxyrhina minuta*.)
 1850 F. (*G. minor*.)
- Leidy, J. 1877 A, p. 254. (*Prionodon antiquus*.)
 Eocene; South Carolina, Alabama: Miocene; Maryland?

Carcharhinus (*Prionace*) tenuis (Agassiz).

- Agassiz, L. 1843 B, iii, p. 242, pl. xxxa, fig. 15. (*Carcharias*.)
- ?Gibbes, R. W. 1849 A, p. 191. (*Carcharias*.)
 1850 G, p. 300, pl. xlii, fig. 8. (*Carcharias*.)
- Woodward, A. S. 1889 D, p. 442. [*Carcharias* (*Prionodon*).]
- Senonian; Switzerland: Eocene?; South Carolina.

Carcharhinus sp. indet.

- Woodward, A. S. 1889 D, pp. 455, 456.
 Eocene; Alabama.

Microdus laevis Emmons.

- Emmons, E. 1857 A, p. 48 with figure.
 Triassic; North Carolina.

- Gibbes, R. W. 1846 A, p. 42. (*H. serra*, *H. paucidens*, *Lamna hopei*.)
 1849 A, p. 193, pl. xxv, figs. 75-85 (*H. serra*); p. 198, pl. xxvi, figs. 120-123 (*Lamna hopei*.)
 1850 F. (*H. serra*, *Lamna hopei*.)
- Giebel, C. G. 1848 A, p. 368. (*H. serra*, *H. paucidens*.)
- Leidy, J. 1877 A, p. 254.
- Pedroni, P. M. 1844 A, p. 284, pl. i, fig. 20 (*H. serra*); figs. 21, 22 (*H. paucidens*).
- Pictet, F. J. 1854 A, p. 243.
- Probst, J. 1878 A, p. 143, pl. i, figs. 49-57.
- Quenstedt, F. A. 1885 A, p. 265, fig. 81.
- Sauvage, H. E. 1875 A, p. 634, pl. xxii, fig. 2. (*Odontaspis sacheri*.)
- Sismonda, E. 1849 A, p. 33, pl. i, figs. 17, 18.
- Woodward, A. S. 1884 A, p. 228, fig. 133.
 1889 D, p. 449.
 1900 A, p. 5, pl. i, figs. 11, 11a.
- Wyman, J. 1850 B, p. 234.
- Zittel, K. A. 1890 (1887) A, p. 85, fig. 89.
 For additional bibliography see Woodward, A. S. 1889 D, p. 449.
- Tertiary; Europe: Eocene; North Carolina, South Carolina: Miocene; Virginia: Pliocene?; Argentine Republic.

Hemipristis sp. indet.

- Woodward, A. S. 1889 D, p. 456.
 Eocene; South Carolina.

SPHYRNINÆ.

- Duméril, A. 1865 A, p. 380. (Cestraciontes.)
 Günther, A. 1870 A, p. 353. (Zygænina.)
 Jordan and Evermann 1896 A, p. 43. (Sphyrnidae.)

SPHYRNA Rafinesque. Type *Squalus zygaena* Linn.

- Rafinesque*, C. S., 1810, Caratteri di alcuni generi, etc., p. 12.
 Agassiz, L. 1843 B, iii, pp. 234, 303, 366, pl. N, figs. 8-10.
 Duméril, A. 1865 A, p. 381. (Cestracion.)
 Gegenbaur, C. 1872 A. (Zygaena.)
 Gibbs, R. W. 1849 A, p. 194.
 Günther, A. 1870 A, p. 380. (Zygaena.)
 1880 A, p. 318. (Zygaena.)
 Hasse, C. 1882 A, p. 273. (Zygaena.)
 Hubrecht, A. A. W. 1878 A. (Zygaena.)
 Jaekel, O. 1894 A, p. 165. (Zygaena.)
 Jordan and Evermann 1896 A, p. 43.
 Klunzinger, C. B. 1871 A, p. 665. (Zygaena.)
 Mivart, St. G. 1879 A. (Zygaena.)
 Müller and Henle 1841 A, p. 51.
 Woodward, A. S. 1889 D, p. 453.
 Zittel, K. A. 1890 A, p. 86.

Sphyrna gibbesii, nom. nov.

- Emmons, E. 1858 B, additions and corrections to p. 241, fig. 84a. (S. denticulata.)
 Gibbs, R. W. 1849 A, p. 195, pl. xxv, fig. 94. (S. denticulata, not of Agassiz.)
 1850 F. (S. denticulata.)
 Eocene; South Carolina, North Carolina.

Sphyrna lata Agassiz.

- Agassiz*, L. 1843 B, iii, p. 235, pl. xxvii, figs. 58, 59.
 ?Gibbes, R. W. 1849 A, p. 195, pl. xxv, figs. 91-93.
 1850 F.
 Woodward, A. S. 1889 D, p. 454.
 ?Wyman, J. 1850 B, p. 234.
 Tertiary; Virginia; Eocene; South Carolina.
 The identification of the American specimens with Agassiz's species is doubtful.

Sphyrna magna Cope.

- Cope*, E. D. 1867 C, p. 142.
 Woodward, A. S. 1889 D, p. 455.
 Miocene; Virginia.

Sphyrna prisca Agassiz.

- Agassiz*, L. 1843 B, iii, p. 234, pl. xxvi a, figs. 35-50.
 Cope, E. D. 1867 C, p. 142.
 1875 H, p. 362. (Zygaena.)
 1875 V, p. 29. (Zygaena.)
 Gemmellaro, G. G. 1857 A, p. 295, pl. i, fig. 5; pl. vi, fig. 3.
 Gibbs, R. W. 1889 A, p. 194, pl. xxv, figs. 88-90.
 Pedroni, P. M. 1844 A, p. 284, pl. i, figs. 15, 16.
 Woodward, A. S. 1889 D, p. 453.
 Zittel, K. A. 1890 A, p. 86, fig. 93. (S. serrata.)
 Miocene; Europe, Maryland, New Jersey, North Carolina, South Carolina.

Superfamily SQUALOIDEA.

- Gill, T. 1893 A, p. 129. (Tectospondyli, *lapsu calami*.)
 Hasse, C. 1879 A, p. 41. (Cyclospondyli.)
 1882 A, pp. 55-94, pls. viii-x.
 Jaekel, O. 1894 A, p. 51. (Cyclospondyli.)

- Jordan and Evermann 1896 A, p. 53. (Cyclospondyli.)
 Woodward, A. S. 1889 D, p. xxvii. (Cyclospondyli.)

SOMNIOSIDÆ.

- Gill, T. 1895 A, p. 192.
 Duméril, A. 1865 A, p. 450. (Scymni.)
 Gill, T. 1862 A, p. 405. (Scymnoidæ, Echinorhinoidæ.)
 1893 A, p. 129. (Dalatiidæ and Echinorhinidæ.)
 Günther, A. 1870 A, p. 417. (Spinaciadæ, in part.)

SCYMNORHINUS Bonaparte.

- Bonaparte*, C. S. 1846, Cat. Met. Pesci Europei, p. 16.
 Agassiz, L. 1843 B, iii, pp. 305, 367. (Scymnus.)
 Cuvier, G. 1817, Règne Anim., ii, p. 130. (Scymnus, preoccupied.)
 Duméril, A. 1865 A, p. 450.
 Gegenbaur, C. 1872 A, pl. i, fig. 3; pl. iv, fig. 3; pl. vii, fig. 3; pl. xi, fig. 1; pl. xvii, fig. 4; pl. xix, fig. 2. (Scymnus.)
 Gill, T. 1895 A.
 Hasse, C. 1878 A, p. 168. (Scymnus.)
 1882 A, p. 65, pl. ix. (Scymnus.)
 Hubrecht, A. A. W. 1878 A. (Scymnus.)
 Köl liker, A. 1863 A, p. 26. (Scymnus.)

- Hasse, C. 1879 A, p. 43. (Scymnidae.)
 Jordan and Evermann 1896 A, p. 56 (Dalatiidæ; p. 57 (Echinorhinidæ).
 Müller and Henle 1841 A, p. 91. (Scymni.)
 Woodward, A. S. 1889 D, p. 30. (Spinaciadæ, in part.)
 Zittel, K. A. 1890 A, p. 87. (Spinaciadæ, in part.)

Type *Scymnus lichia* Cuvier.

- Müller and Henle 1837 A, p. 116. (Scymnus.)
 1837 B, p. 399. (Scymnus.)
 1838 A, p. 89. (Scymnus.)
 1841 A, p. 91. (Scymnus.)
 Woodward, A. S. 1889 D, p. 33. (Scymnus.)
 Zittel, K. A. 1890 A, p. 88. (Scymnus.)

Scymnorhinus occidentalis (Agassiz).

- Agassiz*, L. 1856 A, p. 272. (Scymnus.)
 1857 A, p. 314, pl. i, figs. 9-13. (Scymnus.)
 Woodward, A. S. 1889 D, p. 458. (Scymnus.)
 Miocene; California.

ECHINORHINUS Blainville. Type *Squalus spinosus* Gmelin.

Blainville, H. M. D., 1816, Bull. Soc. Philom., p. 121.
 Agassiz, L. 1843 B (1838), iii, p. 94. (Goniodus.)
 Duméril, A. 1865 A, p. 458.
 Günther, A. 1870 A, p. 428.
 Hasse, C. 1882 A, p. 73, pl. ix.
 Jordan and Evermann 1896 A, p. 57.
 Müller and Henle 1838 A, p. 89.

Müller and Henle 1841 A, p. 96.
 Woodward, A. S. 1889 D, p. 34.

Echinorhinus blakei Agassiz.

Agassiz, L. 1856 A, p. 272.
 1857 A, p. 313, pl. i, figs. 7, 8, 17.
 Miocene of California.

Suborder RAJÆ.

Brühl, B. C. 1847 A.
 Duméril, A. 1865 A, p. 468. ("Raies ou Hypotremes.")
 Gegenbaur, C. 1872 A.
 Gill, T. 1893 A, p. 130. (Hypotremi.)
 Günther, A. 1870 A, p. 434. (Batoidei.)
 1880 A, p. 335. (Batoidei.)
 Haeckel, E. 1895 A, p. 236. (Rajacei.)
 Hasse, C. 1879 A, p. 44. (Tectospondyli.)
 1882 A, p. 163. (Tectospondyli.)
 Haswell, W. A. 1884 A, p. 115. (Batoidei.)
 Jaekel, O. 1890 C.
 1890 D, p. 110. (Tectospondyli.)
 1892 A.

Jaekel, O. 1894 A, p. 40. (Batoidei.)
 1898 A, p. 44. ("Roehen.")
 Jordan and Evermann 1896 A, p. 59. (Batoidei.)
 Kehner, F. A. 1876 A. (Raii.)
 Köstlin, O. 1844 A, p. 425. ("Roehen.")
 Müller, J. 1846 C, p. 203. (Rajidæ.)
 Müller and Henle 1841 A, p. 103.
 Parker, W. K. 1878 A. (Raii.)
 Steinmann and Döderlein 1890 A, p. 549. (Batoidei.)
 Woodward, A. S. 1889 D, p. 30. (Tectospondyli, in part.)
 Zittel, K. A. 1890 A, p. 93. (Batoidei.)

Superfamily PACHYURA Gill.

Gill, T. 1872 C, p. 23.
 1882, in Jordan and Gilbert's Synop. N. A.
 Fishes, p. 36.
 1893 A, p. 130. (Sarcura.)

Jaekel, O. 1894 A, p. 69. (Rhinoraji.)
 1898 A, p. 45. (Rhinoraji.)
 Jordan and Evermann 1896 A, p. 59. (Sarcura.)

TAMIOBATIDÆ, nom. nov.

TAMIOBATIS Eastman. Type *T. vetustus* Eastman.

Eastman, C. R. 1897 A, p. 85.
 Miller, S. A. 1897 A, p. 793.
 Relationships to the Rhinobatidæ doubtful.

Tamiobatis vetustus Eastman.

Eastman, C. R. 1897 A, p. 85, pl. i.
 Devonian?; Kentucky.

RAJIDÆ.

Agassiz, L. 1843 B, iii, p. 73. ("Raies.")
 Duméril, A. 1865 A, p. 525. (Rajæ.)
 Günther, A. 1870 A, pp. 435, 455.
 1880 A, p. 340.
 1881 A, p. 686.
 Hasse, C. 1878 A, p. 170.
 1879 A, p. 48. (Rajæ.)
 1882 A, p. 163. (Rajæ.)
 Haswell, W. A. 1884 A, p. 117.
 Howes, G. B. 1890 A.
 Hubrecht, A. A. W. 1878 A.
 Kölliker, A. 1860 B, p. 212.
 Jaekel, O. 1890 A, p. 94.

Jaekel, O. 1891 D, p. 191.
 1894 A, p. 81.
 1898 A, p. 52.
 Jordan and Evermann 1896 A, p. 66.
 Müller and Henle 1841 A, p. 132. (Rajæ.)
 Nicholson and Lydekker 1889 A, p. 933.
 Owen, R. 1845 B, p. 43.
 Stannius, H. 1854 A.
 Steinmann and Döderlein 1890 A, p. 550.
 Stephan, P. 1900 A.
 Woodward, A. S. 1889 D, p. 84.
 Zittel, K. A. 1890 A, p. 103.

RAJA Linn. Type *R. batis* Linn.

Linnaeus, C., 1858, Syst. Nat., ed. x, p. 231.
 Duméril, A. 1865 A, p. 526.
 Gegenbaur, C. 1872 A, pl. iii, fig. 2; pl. vi, fig. 4;
 pl. xiii, fig. 1; pl. xiv, figs. 4, 6; pl. xv, fig. 1.

Günther, A. 1870 A, p. 455.
 1880 A, p. 340.
 Hasse, C. 1878 A.
 1882 A, p. 163, pl. xxii.

Hubrecht, A. A. W. 1878 A.
 Jordan and Evermann 1896 A, p. 66.
 Müller and Henle 1837 A, p. 111.
 1841 A, p. 132, plates.
 Stephan, P. 1900 A.
 Woodward, A. S. 1889 D, p. 85.
 Zittel, K. A. 1890 A, p. 104.

Raja dux Cope.

Cope, E. D. 1867 C, p. 141.
 Woodward, A. S. 1889 D, p. 459.
 Miocene; Maryland.

GRYPHODOBATIS Leidy. Type *G. uncus* Leidy.

Leidy, J. 1877 A, p. 249.
 A genus whose position is doubtful.

Gryphodobatis uncus Leidy.

Leidy, J. 1877 A, p. 249, pl. xxxiv, figs. 8, 9.
 Woodward, A. S. 1889 D, p. 156.
 Phosphate beds; South Carolina.

ONCOBATIS Leidy. Type *O. pentagonus* Leidy.

Leidy, J. 1870 K, p. 70.
 Nicholson and Lydekker, 1889 A, p. 934.
 Woodward, A. S. 1889 D, p. 90.

Oncobatis pentagonus Leidy.

Leidy, J. 1870 K, p. 70.

Cope, E. D. 1883 L, p. 153. (Raja.)
 Leidy, J. 1871 C, p. 370.
 1873 B, pp. 264, 353, pl. xvii, figs. 18, 19.
 Woodward, A. S. 1889 D, p. 90.
 Pliocene; Idaho.

PRISTIDÆ.

Duméril, A. 1865 A, p. 471. (Pristides.)
 Gegenbaur, C. 1872 A.
 Günther, A. 1870 A, p. 436.
 1880 A, p. 336.
 1881 A, p. 686.
 Hasse, C. 1882 A, p. 121.
 Haswell, W. A. 1884 A, p. 116.
 Hubrecht, A. A. W. 1878 A.
 Jaekel, O. 1894 A, p. 75.

Jordan and Evermann 1896 A, p. 60.
 Müller and Henle 1841 A, p. 105. (Pristides.)
 Nicholson and Lydekker 1889 A, p. 930.
 Pictet, F. J. 1854 A, p. 274. (Pristides.)
 Woodward, A. S. 1885 B, p. 227.
 1888 B, p. 451.
 1889 D, p. 73.
 1898 B, p. 52.
 Zittel, K. A. 1890 A, p. 94.

PRISTIS LATHAM. Type *Squalus pristis* Linn. = *Pristis antiquorum*.

Latham, John 1794, Trans. Linn. Soc., ii, p. 276.
 Agassiz, L. 1843 B, iii, p. 382.
 Duméril, A. 1865 A, p. 471.
 Gegenbaur, C. 1872 A, pl. iii, fig. 4; pl. xiii, figs. 4-6; pl. xiv, fig. 2.
 Günther, A. 1880 A, p. 347.
 Hasse, C. 1882 A, p. 121, pl. xvi.
 Hubrecht, A. A. W. 1878 A, pl. ii, figs. 2-5, 8.
 Jaekel, O. 1890 D.
 1894 A.
 Jordan and Evermann 1896 A, p. 60.
 Müller and Henle 1837 A, p. 116.
 1837 B, p. 399.
 1841 A, p. 105.
 Nicholson and Lydekker 1889 A, p. 190.
 Owen, R. 1845 B, p. 40, pls. viii, ix.
 Pictet, F. J. 1854 A, p. 275.
 Stannius, H. 1854 A.
 Tomes, C. S. 1898 A, p. 246.
 Woodward, A. S. 1889 D, p. 73.
 1899 A, p. 3.
 Zittel, K. A. 1890 A, p. 94.

Pristis agassizi Gibbes.

Gibbes, R. W. 1847 B, p. 11, pl. i, figs. 6, 7,
 Woodward, A. S. 1889 D, p. 75.
 Eocene; South Carolina.

Pristis amblodon Cope.

Cope, E. D. 1869 L, p. 312.
 1875 H, p. 362.
 Woodward, A. S. 1889 D, p. 458.
 Eocene; New Jersey.

Pristis attenuatus Cope.

Cope, E. D. 1869 F, p. 244.
 1875 V, p. 29.
 Woodward, A. S. 1889 D, p. 459.
 Tertiary; North Carolina.

Pristis brachyodon Cope.

Cope, E. D. 1869 A, p. 312.
 1875 V, p. 29.
 Woodward, A. S. 1889 D, p. 459.
 Cretaceous (Greensand); Virginia: Miocene;
 North Carolina.

Pristis curvidens Leidy.

Leidy, J. 1855 D.
 Woodward, A. S. 1889 D, p. 75.
 Cretaceous (Greensand); New Jersey.

Pristis ensidens Leidy.

Leidy, J. 1855 D.
 1877 A, p. 252, pl. xxxiv, figs. 31, 32.
 Woodward, A. S. 1889 D, p. 75.
 Phosphate beds; South Carolina.

Superfamily MASTICURA Gill.

Gill, T. 1872 C, p. '22.

1882, in Jordan and Gilbert's Synop. Fishes

N. A., p. 36.

1893 A, p. 130.

Jaekel, O. 1894 A, pp. 64, 115. (Centrobati.)

1898 A, p. 45. (Centrobati.)

1899 A, p. 298. (Centrobatidae.)

Jordan and Evermann 1896 A, pp. 59, 79.

PTYCHODONTIDÆ.

Jaekel, O. 1898 A, p. 51. (Ptychodontinæ.)

HEMIPTYCHODUS Jaekel. Type *Ptychodus mortoni* Mantell.

Jaekel, O. 1894 A, p. 137.

Hemiptychodus mortoni (Mantell).

Mantell, G. A., in Morton, S. G. 1842 A, p. 215, pl. xi, figs. 7, 7a. (Ptychodus.)

Agassiz L. 1843 B, iii, p. 158, pl. xxv, figs. 1-3. (Ptychodus.)

Cope, E. D. 1874 C, p. 48. (Ptychodus.)

1875 E, p. 294. (Ptychodus.)

Dana, J. D. 1896 A, p. 843, fig. 1406. (Ptychodus.)

De Kay, J. E. 1842 B, p. 386. (Ptychodus.)

Dixon, F. 1878 A, p. 392, pl. xxxi, figs. 6, 7. (Ptychodus.)

Giebel, C. G. 1848 A, p. 334. (Ptychodus.)

Hilgard, E. W. 1860 A, p. 389. (Ptychodus.)

Jaekel, O. 1894 A, p. 137. (Hemiptychodus.)

Leidy, J. 1868 H, p. 205. (Ptychodus.)

1870 H, p. 12. (Ptychodus.)

1873 B, pp. 295, 352, pl. xviii, figs. 1-14. (Ptychodus.)

Morton, S. G. 1834 A, pl. xviii, figs. 1, 2. (No name or description.)

Tuomey, M. 1858 A, p. 268. (Ptychodus.)

Williston, S. W. 1900 A, p. 30, pl. vii; pl. viii, fig. 1; pl. ix. (Ptychodus.)

1900 B, p. 238, pls. xxv, xxvi, fig. 1; pl. xxviii. (Ptychodus.)

Woodward, A. S. 1887 B, p. 130. (Ptychodus.)

1889 D, p. 149. (Ptychodus.)

Cretaceous; Alabama, Mississippi, Kansas.

PRYCHODUS Agassiz. Type *P. mammillaris* Agassiz.

Agassiz, L. 1843 B (1835), Feuille, p. 54.

1843 B (1839), iii, pp. 56, 150.

1844 A.

Cope, E. D. 1874 C, p. 47. (Sporetodus, type *S. janevii*.)

1886 S.

Davis, J. W. 1890 A, p. 375.

Dixon, F. 1850 A, p. 361.

1858 A, p. 390.

Hasse, C. 1884, Palæontographica, xxxi, p. 9, pl. ii, figs. 16, 17. (Selache davisi.)

Jaekel, O. 1890 A, p. 94.

1891 D, p. 191.

1894 A, p. 132.

Geinitz, H. B. 1839 A, pp. 12, 38, 63.

Leidy J. 1868 H.

1870 H.

Mackie, S. J. 1863 B.

Owen, R. 1845 B, p. 57, pls. xvii-xix.

1860 E, p. 110.

Pictet, F. J. 1854 A, p. 264.

Priem, F. 1896 A.

Quenstedt, F. A. 1852 A, p. 180.

1885 A, p. 281.

Sauvage, H. E. 1870 A, p. 15.

Williston, S. W. 1900 A, p. 29.

Woodward, A. S. 1885 B, p. 107.

1887 B.

1888 I, p. 294, fig. 1.

1889 D, p. 122.

Zittel, K. A. 1890 A, p. 78, figs. 77, 78.

Ptychodus anonymus Willist.

Williston, S. W. 1900 A, p. 32, pl. xi, figs. 5-8, 16-18, 20-22, 24.

1900 B, p. 241, pl. xxix, figs. 5-8, 16-18, 20-22, 24.

Cretaceous (Niobrara, Benton?); Kansas.

Ptychodus decurrens Agassiz.

Agassiz, L. 1843 B (1839), Feuille, p. 54.

1843 B (1839), iii, p. 154, pl. xxv b, figs. 1, 2, 4, 6-8 (not figs. 3, 5).

Dixon, F. 1850 A, p. 362, pl. xxx, figs. 7, 8; pl. xxxi, fig. 1; pl. xxxii, fig. 5 (P. decurrens); p. 363, pl. xxxi, fig. 9 (P. depressus).

1858 A, p. 390, pl. xxx, figs. 7, 8; pl. xxxi, fig. 1; pl. xxxii, fig. 5.

Fritsch, A. 1878 A, p. 14, fig. 34.

Kiprijanoff, V. 1852 A, p. 490, pl. xiii, figs. 4, 5.

Owen, R. 1845 B, ii, p. 57, pls. xviii, xix.

Quenstedt, F. A. 1852 A, p. 181, pl. xiii, fig. 59.

1885 A, p. 281, text fig. 86; pl. xxi, figs. 63, 64.

Reuss, A. E. 1846 A, p. 1, pl. ii, figs. 9, 10.

Sauvage, H. E. 1870 A, p. 18.

1879 A, p. 53, pl. iii, figs. 25, 26.

Woodward, A. S. 1887 B, pl. x, figs. 1-10, 13.

1889 D, p. 138.

1898 B, p. 53, fig. 42.

Zittel, K. A. 1890 A, p. 79, figs. 78 a, b.

Cretaceous; England, France, Germany; also from Kearns Cañon, Arizona (specimen in U. S. National Museum).

Ptychodus janevii Cope.

Cope, E. D. 1874 C, p. 47. (Sporetodus.)

1875 E, pp. 244, 294. (P. janevii.)

Williston, S. W. 1900 A, p. 33, pl. xii, figs. 9, 10, 11. (P. janevii.)

1900 B, p. 242, pl. xxx, figs. 9, 10, 11. (P. janevii.)

Woodward, A. S. 1889 D, p. 151.

Cretaceous (Niobrara); Kansas.

Ptychodus mammillaris Agassiz.

- Agassiz*, L. 1843 B (1835), Feuill., p. 54.
 1843 B (1839), iii, p. 151, pl. xxv b, figs. 11-20
 (P. mammillaris); p. 154, pl. xxv b, figs. 3,
 5 (P. decurrens); p. 155, pl. xxv b, figs. 9,
 10 (P. altior).
Cope, E. D. 1875 E, p. 294.
Davis, J. W. 1890 A, p. 378, pl. xxxviii.
De Kay, J. E. 1842 B, p. 386.
Dixon, F. 1850 A, p. 361, pl. xxx, fig. 6; pl. xxxi,
 fig. 4.
 1878 A, p. 390, pl. xxx, fig. 6; pl. xxxi, fig. 4.
Fritsch, A. 1878 A, p. 14, text fig. 33.
Giebel, C. G. 1848 A, p. 333.
Kiprijanoff, V. 1852 A, p. 487, pl. xii, fig. 3; pl. xiii,
 fig. 3.
Pietet, F. J. 1854 A, p. 265, pl. xxviii, fig. 27.
Quenstedt, F. A. 1852 A, p. 181.
 1885 A, p. 282, pl. xxi, figs. 61, 62. (P. de-
 currens.)
Reuss, A. E. 1846 A, p. 2, pl. ii, figs. 11-13.
Sauvage, H. E. 1870 A, p. 16, figs. 86-89.
Woodward, A. S. 1885 B, p. 109, fig. 81.
 1889 D, p. 133.
 Cretaceous: Europe, Delaware.
 For additional citations of literature bearing
 on European specimens, see Woodward, A. S.,
 1889 D, p. 133.

Ptychodus martini Willist.

- Williston*, S. W. 1900 A, p. 32, pl. x.
 1900 B, p. 240, pl. xxviii.
 Cretaceous (Niobrara); Kansas.

Ptychodus occidentalis Leidy.

- Leidy* J. 1868 H, p. 207.
Cope, E. D. 1874 C, p. 48.
 1875 E, p. 294.
Leidy, J. 1873 E, pp. 298, 352, pls. xvii, figs. 7, 8;
 pl. xviii, figs. 15-18.
Williston, S. W. 1900 A, p. 33, pl. xi, fig. 4; pl. xii,
 fig. 13.
 1900 B, p. 242, pl. xxix, fig. 4; pl. xxx, fig. 13.
Woodward, A. S. 1889 D, p. 151.
 Cretaceous (Niobrara); Kansas.

Ptychodus papillosus Cope.

- Cope*, E. D. 1875 E, p. 294.
 1875 F, p. 63.
 Cretaceous: Colorado.

Ptychodus parvulus Whiteaves.

- Whiteaves*, J. F. 1889 B, p. 191, pl. xxvi, figs. 5 a,
 b, c.
 Cretaceous (Niobrara); Manitoba.

Ptychodus polygyrus Agassiz.

- Agassiz*, L. 1843 B (1835), Feuill.; p. 55.
Agassiz, L., in Buckland, W. 1837 A, pl. xxxvii f.
 (No description).
Agassiz, L. 1843 B (1839) B, iii, p. 156, pl. xxv, figs.
 4-11; pl. xxv b, figs. 21-23.
Cope, E. D. 1874 C, p. 48.
 1875 E, p. 294.
Dixon, F. 1850 A, p. 363, pl. xxx, fig. 9; pl. xxxi, fig.
 10 (P. polygyrus); p. xii, pl. xxx, figs. 1, 2 (P.
 latissimus).
 1878 A, p. 391, pl. xxx, figs. 1, 2 (P. latissi-
 mus); p. 392, pl. xxx, fig. 9; pl. xxi, fig. 10
 (P. polygyrus).
Fritsch, A. 1878 A, p. 14, fig. 35. (P. polygyrus.)
Gibbes, R. W. 1850 A, p. 14.
 1850 G, pl. 42, figs. 5, 6.
Giebel, C. G. 1848 A, p. 333.
Kiprijanoff, V. 1852 A, p. 494, pl. xiii, fig. 6.
Leidy, J. 1868 H, p. 208.
 1873 B, p. 352.
Mackie, S. J. 1863 B, pl. ix.
Williston, S. W. 1900 A, p. 31, pl. xi, fig. 9; pl. x,
 fig. 14.
 1900 B, p. 240, pl. xxix, fig. 9; pl. xxx, fig. 14.
Woodward, A. S. 1885 B, p. 109, fig. 82.
 1889 D, p. 143.
 1898 B, p. 52, fig. 41.
 Cretaceous: Alabama, Kansas.

Ptychodus whipplei Marcou.

- Marcou*, J. 1858 A, p. 33, pl. i, figs. 4, 4a.
Cope, E. D. 1874 C, p. 48. (P. whippleyi.)
 1875 E, p. 294. (P. whippleyi.)
 1875 F, p. 63. (P. whippleyi.)
Leidy, J. 1873 B, pp. 300, 352, pl. xviii, figs. 19, 20.
 (P. whippleyi.)
Newberry, J. S. 1876 A, p. 137, pl. iii, figs. 2-2f. (P.
 whippleyi.)
Osborn, Scott and Speir 1878 A, p. 106. (P.
 whippleyi.)
Williston, S. W. 1900 A, p. 33, pl. xi, figs. 10-15.
 1900 B, p. 243, pl. xxix, figs. 10-15. (P.
 whippleyi.)
Woodward, A. S. 1889 D, p. 152. (P. whippleyi.)
 Cretaceous (Niobrara); Kansas, Colorado,
 New Mexico.

Ptychodus sp. indet.

- Williston*, S. W. 1900 A, p. 34, pl. xi, figs. 2, 3, pl.
 xiii, fig. 53.
 1900 B, p. 243, pl. xxix, figs. 2, 13; pl. xxxi,
 fig. 53.
 Cretaceous (Benton); Kansas

DASYBATIDÆ.

Jordan and Evermann 1896 A, p. 79.

Unless otherwise stated, the authors below
 cited refer to this family under the name
Trygonidæ:

- Duméril*, A. 1865 A, p. 578. (Trygones.)
Gegenbaur, C. 1865 B.
Gill, T. 1893 A, p. 130. (Dasybatidæ.)

Günther, A. 1870 A, p. 471.

- 1880 A, p. 342.
 1881 A, p. 686.
Hasse, C. 1878 A, p. 169.
 1879 A, p. 47.
 1882 A, p. 136.
Haswell, W. A. 1884 A, p. 117.

- Howes, G. B. 1890 A.
 Jaekel, O. 1890 C, p. 56.
 1891 D, p. 191. ("Torpediniden.")
 1894 A, p. 139. (Trygoninæ.)
 1898 A, p. 51. (Trygoninæ.)

- Müller and Henle 1841 A, p. 156. (Trygones.)
 Woodward, A. S. 1889 D, p. 152.
 Zittel, K. A. 1890 A, p. 105.

DASYATIS Rafinesque. Type *D. ujus* = *D. pastinica* Linn.

Rafinesque, C. S., 1810, Caratteri di alcuni nuovi generi, p. 16.

Unless otherwise stated, the following authors refer to this genus under the name *Trygon*:

Cope, E. D. 1879 O. (Xiphotrygon, type *X. acutidens*.)

- 1884 O, p. 49. (Xiphotrygon.)
 Duméril, A. 1865 A, p. 582.
 Gegenbaur, C. 1872 A, pl. iii; pl. vi, fig. 6; pl. xi, fig. 4; pl. xiii, fig. 2; pl. xiv, fig. 3.
 Günther, A. 1880 A, p. 343.
 Hasse, C. 1878 A, p. 170.
 1882 A, p. 142, pl. xix.
 Haswell, W. A. 1884 A, p. 100.
 Howes, G. B. 1890 A.
 Hubrecht, A. A. W. 1878 A.
 Jaekel, O. 1890 A, p. 94.
 1894 A, p. 144.
 Jordan and Evermann 1896 A, p. 82. (*Dasyatis*.)
 Marsh, O. C. 1877 D, p. 261. (*Heliobatis*, type *H. radians*.)
 Müller and Henle 1837 A, p. 117.
 1838 A, p. 90.
 1841 A, p. 158.

- Newberry, J. S. 1888 B, p. 121. (*Heliobatis*.)
 Nicholson and Lydekker 1889 A, p. 937.
 Woodward, A. S. 1889 D, p. 153. (Xiphotrygon.)
 Zittel, K. A. 1890 A, p. 105. (Trygon, Xiphotrygon.)

Dasyatis carolinensis (Emmons).

- Emmons, E. 1858 B, p. 243, figs. 91, 92, 94, 95. (Trygon.)
 1860 A, p. 215, fig. 183⁵. (Trygon.)
 Tertiary; North Carolina.

Dasyatis hastata? (De Kay).

- De Kay, J. E.* 1842 B, p. 373, pl. lxxv, fig. 214. (Trygon.)
 Jordan and Evermann 1896 A, p. 84.
 Leidy, J. 1860 B, p. 119, pl. xxvii, figs. 1, 2.
 Post-pliocene; South Carolina.

Dasyatis radians (Marsh).

- Marsh, O. C. 1877 D, p. 256. (*Heliobatis*.)
 Cope, E. D. 1879 O. (Xiphotrygon *acutidens*.)
 1884 O, p. 50, pl. i, figs. 1-5. (*X. acutidens*.)
 Jaekel, O. 1894 A, p. 134. [Trygon (*Tæniura*).]
 King, C. 1878 A, p. 394. (*Heliobatis*.)
 Woodward, A. S. 1889 D, p. 155. (*X. acutidens*.)
 Zittel, K. A. 1890 A, p. 105. (*X. acutidens*.)
 Eocene (Green R.); Wyoming.

Dasyatis sp. indet.

- Leidy, J. 1873 B, p. 353, pl. xxxii, figs. 54, 55. (Trygon.)
 Miocene; Virginia.

MYLIOBATIDÆ.

- Duméril, A. 1865 A, p. 631. (Myliobatides.)
 Gegenbaur, C. 1865 B.
 Gill, T. 1893 A, p. 130. (Aëtobatidæ.)
 1894 A. (Aëtobatidæ.)
 Günther, A. 1870 A, p. 488. (Myliobatina.)
 1880 A, p. 344.
 1881 A, p. 686.
 Hasse, C. 1878 A, p. 170.
 1879 A, p. 47.
 1882 A, p. 149.
 Haswell, W. A. 1884 A, p. 117.
 Jaekel, O. 1891 D, p. 191.
 1894 A, p. 150. (Myliobatinae.)
 1898 A, p. 51. (Myliobatinae.)

- Jordan and Evermann, 1896 A, p. 87.
 Müller and Henle 1841 A, p. 176. (Myliobatides.)
 Nicholson and Lydekker, 1889 A, p. 935.
 Pictet, F. J. 1854 A, p. 279. (Myliobatides.)
 Semon, R. 1899 A, p. 76.
 Stannius H. 1854 A. (Myliobatides.)
 Steinmann and Döderlein, 1890 A, p. 549.
 Woodward, A. S. 1889 D, p. 109.
 Zittel, K. A. 1890 A, p. 99.

MYLIOBATHS Dum. Type *Raja aquila* Linn.

Duméril, C. 1817, in Cuvier's Règne Anim., ii, p. 137.

By many of the following authors this name is spelled *Myliobates*.

- Agassiz, L. 1843 B, iii, p. 317.
 Duméril, A. 1865 A, p. 633.
 Gibbes, R. W. 1850 G.
 Gill, T. 1894 A, p. 113.

Günther, A. 1870 A, p. 488.
 1880 A, p. 344.

- Hasse, C. 1882 A, p. 148, pls. xx, xxi
 Howes, G. B. 1890 A.
 Hubrecht, A. A. W. 1878 A.
 Jaekel, O. 1890 A, p. 94.
 1894 A, p. 129.
 Jordan and Evermann 1896 A, p. 89.

Müller and Henle, 1837 A, p. 117.

1837 B, p. 401.

1841 A, p. 176.

Nicholson and Lydekker 1889 A, p. 935.

Owen, R. 1845 B, p. 46, pls. xxv-xxvii.

Quenstedt, F. A. 1852 A, p. 182.

1885 A, p. 287.

Röse, C. 1897 A, p. 39, figs. 9-15.

Sismonda, E. 1849 A, p. 50.

Steinmann and Döderlein, 1890 A, p. 549.

Tomes, C. S. 1898 A, p. 247.

Treuenfels, P. 1896 A, p. 1, pls. i, ii.

Woodward, A. S. 1888 F.

1889 D, p. 109.

1899 A, p. 3.

Wyman, J. 1850 B, p. 234.

Zittel, K. A. 1890 A, p. 100.

Myliobatis bisulcus Marsh.

Marsh, O. C. 1870 E, p. 229.

Leidy, J. 1877 A, p. 239.

Woodward, A. S. 1889 D, p. 121.

Eocene; New Jersey.

Myliobatis copeanus Clark.

Clark, W. B. 1895 A, p. 4.

1897 A, p. 61, pl. vii, figs. 3a, 3b.

Eocene; Maryland, Virginia.

Myliobatis fastigiatus Leidy.

Leidy, J. 1877 A, p. 239, pl. xxxi, fig. 11.

1876 E, p. 86. (No description).

Woodward, A. S. 1889 D, p. 121.

Eocene; New Jersey.

Myliobatis gigas Cope.

Cope, E. D. 1867 C, p. 140.

Leidy, J. 1877 A, p. 241, pl. xxxiii, fig. 4.

Woodward, A. S. 1889 D, p. 122.

Miocene; Maryland.

Myliobatis glottoides Cope.

Cope, E. D. 1870 F, p. 293.

Eocene; New Jersey.

Myliobatis holmesii Gibbes.

Gibbes, R. W. 1850 G, p. 299, pl. xlii, figs. 1-3.

Cope, E. D. 1867 C, p. 140.

Gibbes, R. W. 1850 B. (No description.)

Leidy, J. 1876 E, p. 86. (M. magister; no description).

1877 A, p. 233, pl. xxxiii, fig. 7 (M. magister);

p. 234 (M. holmesii).

Woodward, A. S. 1889 D, p. 122.

Phosphate beds; South Carolina.

Myliobatis jugosus Leidy.

Leidy, J. 1877 A, p. 240, pl. xxxi, figs. 4, 5.

1876 E, p. 86. (No description.)

Woodward, A. S. 1889 D, p. 122.

Eocene; New Jersey.

Myliobatis leidy Hay.

Hay, O. P. 1899 E, p. 785.

Leidy, J. 1855 C, p. 395. (M. serratus, not of H. v.

Meyer, 1843.)

1877 A, p. 239, pl. xxxii, fig. 5. (M. serratus.)

Woodward, A. S. 1888 F, p. 38. (M. serratus.)

1889 D, p. 123. (M. serratus.)

Eocene; New Jersey.

Myliobatis mordax Leidy.

Leidy, J. 1877 A, p. 234, pl. xxxiv, fig. 3.

1876 E, p. 86. (No description.)

Woodward, A. S. 1889 D, p. 123.

Phosphate beds; South Carolina.

Myliobatis pachyodon Cope.

Cope, E. D. 1867 C, p. 140.

Leidy, J. 1877 A, p. 242, pl. xxxii, fig. 6.

Woodward, A. S. 1889 D, p. 123.

Miocene; Maryland.

Myliobatis rectidens Cope.

Cope, E. D. 1870 F, p. 294.

Cretaceous; New Jersey.

Myliobatis rugosus Leidy.

Leidy, J. 1855 C, p. 395.

1855 C, p. 396. (M. obesus.)

1877 A, p. 236, pl. xxxi, figs. 6-10; pl. xxxiv, fig. 44. (M. obesus.)

Woodward, A. S. 1889 D, p. 123.

Eocene; New Jersey.

Myliobatis transversalis Gibbes.

Gibbes, R. W. 1850 G, pl. xlii, fig. 4.

1850 B. (No description.)

Woodward, A. S. 1889 D, p. 124.

Eocene; South Carolina.

Myliobatis vicomicanus Cope.

Cope, E. D. 1867 C, p. 140.

1870 F, p. 294.

Leidy, J. 1877 A, p. 242, pl. xxxiii, fig. 5.

Woodward, A. S. 1889 D, p. 122. (Syn. of M. gigas.)

Miocene; Maryland.

Myliobatis sp. indet.

Leidy, J. 1873 B, p. 354, pl. xxxii, figs. 52, 53.

Miocene; Virginia.

MESOBATIS Leidy. Type *Aëtobatis eximius* Leidy.

Leidy, J. 1877 A, p. 244.

Woodward, A. S. 1889 D, p. 131.

Mesobatis eximius Leidy.

Leidy, J. 1855 C, p. 396. (Aëtobatis.)

1877 A, p. 244, pl. xxxi, fig. 12.

Woodward, A. S. 1889 D, p. 131.

Phosphate beds; South Carolina.

ÆTOBATUS Blainville. Types *A. vulgaris*, *A. narinari*, etc.

Blainville, H. M. D., 1816, Jour. de Physique, lxxxiii, p. 261.

Most of the authors here cited spell this name *Ætobatis*.

Agassiz, L. 1843 B, iii, p. 325.

Duméril, A. 1865 A, p. 640.

Gill, T. 1894 A, p. 114.

Günther, A. 1870 A, p. 492.

1880 A, p. 345.

Hasse, C. 1882 A, p. 155, pl. xxi.

Jaekel, O. 1894 A, p. 130.

1899 A, p. 266.

Jordan and Evermann 1896 A, p. 88.

Müller and Henle 1837 A, p. 118.

1837 B, p. 401.

1841 A, p. 179.

Pictet, F. J. 1854 A, p. 281.

Quenstedt, F. A. 1852 A, p. 182.

1885 A, p. 287.

Woodward, A. S. 1889 D, p. 127.

1899 A, p. 5.

Zittel, K. A. 1890 A, p. 101.

Ætobatus arcuatus Agassiz.

Agassiz, L. 1843 B, iii, p. 327. (*Ætobatis*.)

Cope, E. D. 1867 C, p. 139. (*Ætobatis*.)

1875 V, p. 29. (*Ætobatis*.)

Leidy, J. 1877 A, p. 245, pl. xxxi, fig. 14. (*Ætobatis*.)

Woodward, A. S. 1889 D, 130. (*Ætobatis*.)

Miocene; Europe, Maryland, North Carolina.

The identification of the American specimens is doubtful.

Ætobatus perspicuus Leidy.

Leidy, J. 1855 C, p. 396. (*Ætobatis*.)

1877 A, p. 244, pl. 31, fig. 13. (*Ætobatis*.)

Woodward, A. S. 1889 D, p. 131. (*Ætobatis*.)

Eocene ?; New Jersey.

Ætobatus profundus Cope.

Cope, E. D. 1867 C, p. 139. (*Ætobatis*.)

Leidy, J. 1877 A, p. 246, pl. xxxi, fig. 19. (*Ætobatis*.)

Woodward, A. S. 1889 D, p. 131. (*Ætobatis*.)

Miocene; Maryland.

PLINTHICUS Cope. Type *P. stenodon* Cope.

Cope, E. D. 1869 L, p. 316.

Woodward, A. S. 1889 D, p. 459. (Syn.? of *Ætobatus*.)

Plinthicus stenodon Cope.

Cope, E. D. 1869 L, p. 316.

1875 H, p. 362.

Woodward, A. S. 1889 D, p. 459.

Miocene; New Jersey.

RHINOPTERA Kuhl. Type *R. marginata* Cuvier.

Kuhl, 1828, in Cuvier's Règne Anim., ed. 2, p. 401.

Agassiz, L. 1843 B, iii, p. 79 (*Zygobatis*); p. 328 (*Zygobates*).

Duméril, A. 1865 A, p. 644.

Günther, A. 1880 A, p. 346.

Hasse, C. 1882 A, p. 158, pl. xxi.

Jaekel, O. 1894 A, p. 129.

Müller and Henle 1837 B, p. 401.

1841 A, p. 181.

Quenstedt, F. A. 1885 A, p. 288. (*Zygobatis*, *Rhinoptera*.)

Woodward, A. S. 1885 B, p. 270. (*Zygobatis*.)

1889 D, p. 125. (*Rhinoptera*.)

1899 A, p. 5. (*Rhinoptera* or *Zygobatis*.)

Zittel, K. A. 1890 A, p. 101. (*Zygobatis*.)

Rhinoptera dubia Leidy.

Leidy, J. 1855 C, p. 396. (*Zygobatis*.)

1877 A, p. 247, pl. xxxi, figs. 21-37.

Woodward, A. S. 1889 D, p. 127.

Phosphate beds; South Carolina.

Rhinoptera, sp. indet.

Agassiz, L. 1856 A, p. 275. (*Zygobates*.)

1857 A, p. 316, pl. i, figs. 31-35. (*Zygobates*.)

Leidy, J. 1871 C, p. 370. (*Zygobates*.)

Miocene; California.

MANTIDÆ.

Jordan and Evermann 1896 A, p. 91.

Duméril, A. 1865 A, p. 649. (*Cephaloptera*.)

Gill, T. 1893 A, p. 130. (*Mobulidæ*.)

Günther, A. 1870 A, p. 435. (*Ceratoptera*.)

Jaekel, O. 1894 A, pp. 115-150. (*Ceratopterina*.)

1898 A, p. 51. (*Ceratopterina*.)

Müller and Henle 1838 A, p. 91. (*Cephaloptera*.)

1841 A, p. 184. (*Cephaloptera*.)

MANTA Bancroft. Type *M. birostris* Walb.

Bancroft, E. N. 1829, Zool. Jour., iv, p. 444.

Duméril, A. 1865 A, p. 659. (*Ceratoptera*.)

Günther, A. 1870 A, p. 497. (*Ceratoptera*.)

1880 A, p. 347. (*Ceratoptera*.)

Hasse, C. 1882 A, p. 159, pl. xxi. (*Ceratoptera*.)

1885 A, p. 20. (*Ceratoptera*.)

Jaekel, O. 1894 A. (*Ceratoptera*.)

Jordan and Evermann 1896 A, p. 92. (*Manta*.)

Müller and Henle 1837 A, p. 118. (*Ceratoptera*.)

1837 B, p. 401. (*Ceratoptera*.)

1838 A, p. 91. (*Ceratoptera*.)

1841 A, p. 184. (*Ceratoptera*.)

Zittel, K. A. 1890 A, p. 102. (Ceratoptera.)

Manta unios (Leidy).

Leidy, J. 1876 E, p. 86. (Ceratoptera.)

1877 A, p. 248, pl. xxxiv, figs. 1, 2. (Ceratoptera.)

Woodward, A. S. 1889 D, p. 131. (Ceratoptera.)
Phosphate beds; South Carolina.

Subclass HOLOCEPHALA Bonaparte.¹

Bonaparte, C. L. 1832-41, Icon. Fauna Ital., iii.

(Pesci), Introd. (Holocephala.)

Bridge, T. W. 1896 A, p. 534.

Cope, E. D. 1872 C.

1877 O, p. 41.

1878 A, p. 292.

1884 N, p. 579.

1884 HH.

1885 G.

1887 S, p. 324.

1889 R, p. 854.

1891 N, p. 10.

1898 B, pp. 17, 28.

Duméril, A. 1865 A, p. 663.

Gadow, H. 1898 A, p. 6.

Gadow and Abbott 1895 A.

Gegenbaur, C. 1865 B, pp. 88, 145.

1898 A.

Günther, A. 1870 A, p. 348.

1880 A, p. 348.

1881 A, p. 686.

Haeckel, E. 1895 A, p. 243.

Hasse, C. 1878 A.

1882 A, p. 25.

Hubrecht, A. A. W. 1877 A.

1878 A.

Huxley, T. H. 1872 A, p. 120.

1876 A.

Müller, J. 1835 A.

1846 C, p. 203.

Nicholson and Lydekker 1889 A, p. 949. (Chimeroides.)

Owen, R. 1860 E, p. 116.

1866 A.

Reis, O. M. 1896 A, p. 204.

1897 A, p. 65.

Stannius, H. 1854 A.

Steinmann and Döderlein 1890 A, p. 550.

Woodward, A. S. 1889 D, p. vi.

1891 A, pp. xvi, 36.

1898 B, p. 154.

Zittel, K. A. 1890 A, p. 106.

Superfamily CHIMÆROIDEA.²

Cope, E. D. 1889 R, p. 854.

1891 N, p. 14.

1898 B, p. 28.

Daviess, W. 1872 A.

Dean, B. 1895 A, p. 99.

Newton, E. T. 1878 C.

Woodward, A. S. 1888 I, p. 299.

1891 A, p. 36.

1898 B, p. 54.

PTYCTODONTIDÆ.

Woodward, A. S. 1891 A, p. 37.

Cope, E. D. 1891 N, p. 14.

1898 B, p. 28.

Eastman, C. R. 1898 B.

PTYCTODUS Pander. Type *P. obliquus* Pander.

Pander, C. H. 1858 A, p. 48.

Cope, E. D. 1871 D, p. 423.

1872 F, p. 339.

Eastman, C. R. 1898 B, pp. 473, 548.

Miller, S. A. 1889 A, p. 610.

Newberry and Worthen 1866 A, p. 106. (Rinodus, type *R. calceolus*.)

1870 A, p. 374.

Rohon, J. V. 1895 A.

Steinmann and Döderlein, 1890 A, p. 50.

Woodward, A. S. 1891 A, p. 38.

1898 B, p. 55.

Zittel, K. A. 1890 A, p. 108.

Ptyctodus calceolus Newb. and Worth.

Newberry and Worthen, 1866 A, p. 106, pl. x, figs. 10-10c. (Rinodus.)

Eastman, C. R. 1898 A, p. 115, fig. 10, A.

1898 B, p. 476, figs. 1-17.

1899 B, p. 282.

Lesley, J. P. 1889 A, p. 841, figures.

Miller, S. A. 1889 A, p. 611, fig. 1170.

Newberry, J. S. 1875 A, p. 59, pl. lix, figs. 13, 13a. (Ptyctodus.)

1889 A, p. 62. (Rhynchodus.)

Newberry and Worthen, 1870 A, p. 374.

Weller, S. 1899 A.

Whiteaves, J. F. 1892 A, p. 353.

1898 B, p. 410.

Woodward, A. S. 1891 A, p. 39.

Devonian (Hamilton); Illinois, Iowa, Missouri, Manitoba.

¹ This name is by most authors spelled *Holocephali*.

² The name of this superfamily is commonly spelled *Chimæroides*.

Ptyctodus compressus Eastman.

Eastman, C. R. 1898 B, p. 479, figs. 18-27.
Devonian (Hamilton); Wisconsin.

Ptyctodus ferox Eastman.

Eastman, C. R. 1898 B, p. 480, figs. 35-40; p. 552.
1899 B, p. 282.
Devonian (Hamilton); Wisconsin.

RHYNCHODUS Newb. Type *R. secans* Newb.

Newberry, J. S. 1873 A, pp. 307, 254, 266.

Eastman, C. R. 1900 C, p. 392.

Huene, F. 1900 A, p. 64.

Miller, S. A. 1889 A, p. 611.

Newberry, J. S. 1870 B, p. 153.

1875 A, p. 58.

1889 A, p. 45.

Nicholson and Lydekker 1889 A, p. 952. (Rhynchodes.)

Woodward, A. S. 1891 A, p. 39.

1898 B, p. 55.

Zittel, K. A. 1890 A, p. 108. (Rhynchodes.)

Rhynchodus excavatus Newb.

Newberry, J. S. 1877 A, p. 397.

Eastman, C. R. 1898 B, p. 486.

1899 B, p. 282.

Newberry, J. S. 1878 A, p. 192.

1889 A, p. 50, pl. xxix, fig. 1.

Woodward, A. S. 1891 A, p. 39.

Devonian (Hamilton); Wisconsin, Iowa.

Rhynchodus occidentalis Newb.

Newberry, J. S. 1878 A, p. 192.

Eastman, C. R. 1898 B, p. 485.

Woodward, A. S. 1891 A, p. 39.

Devonian (Hamilton); Iowa.

Rhynchodus secans Newb.

Newberry, J. S. 1873 A, p. 310, pl. xxvi figs. 1, 1a;
pl. xxix, figs. 1-2a.

Eastman, C. R. 1898 B, pp. 485, 546.

Lesley, J. P. 1889 A, p. 881, figures.

1892 A, pl. clxx.

Newberry, J. S. 1889 A, p. 47, pl. xxviii, figs. 1-3.

Woodward, A. S. 1891 A, p. 39.

Devonian (Corniferous); Ohio.

Rhynchodus sp. indet.

Whiteaves, J. F. 1892 A, p. 353. (No description).
Devonian; Manitoba.

PALÆOMYLUS Woodward. Type *Rhynchodus frangens* Newb.

Woodward, A. S. 1891 A, p. 39.

Eastman, C. R. 1898 B, p. 545.

Palæomylus crassus (Newb.).

Newberry, J. S. 1873 A, p. 312, pl. xxix, fig. 3.
(Rhynchodus.)

Eastman, C. R. 1898 B, p. 545.

Lesley, J. P. 1889 A, p. 879, figure. (Rhynchodus.)

1892 A, pl. cl. (Rhynchodus.)

Newberry, J. S. 1889 A, p. 49, pl. xxviii, fig. 4.

(Rhynchodus.)

Woodward, A. S. 1891 A, p. 40.

Devonian (Corniferous); Ohio.

Palæomylus frangens (Newb.).

Newberry, J. S. 1873 A, p. 311, pl. xxviii, figs. 2,
2a, 3. (Rhynchodus.)

Eastman, C. R. 1898 B, p. 545.

Lesley, J. P. 1889 A, p. 880, figure. (Rhynchodus.)
1892 A, pl. clxx. (Rhynchodus.)

Miller, S. A. 1889 A, p. 611, fig. 1174. (Rhynchodus.)

Newberry, J. S. 1889 A, p. 48, pl. xxix, figs. 2, 3.

Woodward, A. S. 1891 A, p. 40.

Devonian (Corniferous); Ohio.

Palæomylus greenei (Newb.).

Newberry, J. S. 1889 A, p. 51. (Rhynchodus.)

Eastman, C. R. 1898 B, p. 546, fig. 48.

Woodward, A. S. 1891 A, p. 40.

Devonian (Hamilton); Wisconsin.

CHIMÆRIDÆ.

Agassiz, L. 1843 B, iii, p. 336. ("Chimérides.")

Brühl, B. C. 1847 A. ("Chimæren.")

Davies, W. 1872 A.

Dean, B. 1895 A.

Egerton, P. G. 1847 A.

1871 A.

Gadow and Abbott 1895 A.

Gegenbaur, C. 1865 B, p. 88.

Günther, A. 1870 A, p. 349.

1880 A, p. 348.

1881 A, p. 686.

Hubrecht, A. A. W. 1877 A.

Jordan and Evermann 1896 A, p. 93.

Köstlin, O. 1844 A, p. 417.

Newton, E. T. 1878 C.

Nicholson and Lydekker 1889 A, p. 950.

Reis, O. M. 1895 A.

Stannius, H. 1854 A. (Chimære.)

Woodward, A. S. 1891 A, p. 52.

1898 B, p. 58.

Zittel, K. A. 1890 A, p. 107.

CHIMÆRA Linn. Type *C. monstrosa* Linn.

Linnaeus, C., 1758, Syst. Nat., ed. x, p. 236.

Agassiz, L. 1843 B, iii, pp. 64, 336, 354.

1844 A.

Brühl, B. C. 1847 A.

Duméril, A. 1865 A, p. 684.

Egerton, P. G. 1847 A.

Gegenbaur, C. 1898 A.

Goette, A. 1878 A, p. 531.

Hasse, C. 1882 A, p. 25.

Howes, G. B. 1887 A, p. 22.

Hubrecht, A. A. W. 1877 A.

1878 A.

Huxley, T. H. 1872 A, p. 113

1876 A.

Köl liker, A. 1860 B.

Marsh, O. C. 1877 E.

Metschnikoff, O. 1879 A, pl. xxiv, figs. 8-12

Müller, J. 1835 A.

Owen, R. 1845 B, p. 64, pl. xxix.

1860 E, p. 116.

Parker, W. K. 1871 A, p. 194.

Reis, O. M. 1895 A.

Röse, C. 1895 A, p. 568.

Ryder, J. A. 1886 A.

Stannius, H. 1854 A.

Stephan, P. 1900 A.

Woodward, A. S. 1891 A, p. 91.

Zittel, K. A. 1890 A, p. 112.

There are no known American fossil species belonging to this genus.

EDAPHODON Buckland. Type *E. bucklandi* Agassiz.

Buckland, W., 1838, Proc. Geol. Soc., ii, p. 687.

Agassiz, L. 1843 B, iii, p. 340 (*Psittacodon*, in part); p. 350 (*Edaphodon*).

Ammon, L. 1896 A. (On *Ischyodus*.)

Cope, E. D. 1875 E, p. 283. (*Diphrissa*.)

1875 K. (*Diphrissa*, type *Ischyodus solidulus*.)

Egerton, P. G. 1847 A, p. 351.

Leidy, J. 1873 B, p. 306 (*Edaphodon*), p. 309 (*Eumylodus*, type *E. laqueatus*).

Marsh, O. C. 1870 E, p. 230. (*Dipristis*.)

Newton, E. T. 1878 C.

Nicholson and Lydekker 1889 A, p. 951.

Noetting, F. 1885 A, p. 1.

Owen, R. 1860 E, p. 117.

Philippi, E. 1897 A, p. 1. (On *Ischyodus*.)

Pictet, F. J. 1854 A, p. 232.

Woodward, A. S. 1888 I, p. 300.

1891 A, p. 73.

Zittel, K. A. 1890 A, p. 111 (*Edaphodon*); p. 112 (*Eumylodus*).

***Edaphodon divaricatus* (Cope).**

Cope, E. D. 1869 L, p. 315. (*Ischyodus*.)

1875 E, pp. 284, 291. (*Ischyodus*.)

Woodward, A. S. 1891 A, p. 85.

Cretaceous; New Jersey.

***Edaphodon eocænus* (Cope).**

Cope, E. D. 1875 E, pp. 285, 288. (*Ischyodus*.)

Woodward, A. S. 1891 A, p. 85.

Eocene; New Jersey.

***Edaphodon fecundus* (Cope).**

Cope, E. D. 1875 E, pp. 285, 291. (*Ischyodus*.)

Woodward, A. S. 1891 A, p. 85.

Cretaceous; New Jersey.

***Edaphodon gaskillii* (Cope).**

Cope, E. D. 1875 E, pp. 285, 290. (*Ischyodus*.)

Woodward, A. S. 1891 A, p. 85.

Cretaceous; New Jersey.

***Edaphodon incrassatus* (Cope).**

Cope, E. D. 1875 E, pp. 285, 289. (*Ischyodus*.)

Woodward, A. S. 1891 A, p. 85.

Cretaceous; New Jersey.

***Edaphodon laqueatus* (Leidy).**

Leidy, J. 1873 B, pp. 309, 351, pls. xix, figs. 21, 22; pl. xxxvii, figs. 13, 14. (*Eumylodus*.)

Cope, E. D. 1875 E, p. 282. (*Eumylodus*.)

Woodward, A. S. 1891 A, p. 86.

Cretaceous; Mississippi.

***Edaphodon laterigerus* (Cope).**

Cope, E. D. 1869 F, p. 243. (*Ischyodus*.)

1875 E, pp. 284, 288. (*Ischyodus*.)

Woodward, A. S. 1891 A, p. 85.

Cretaceous; New Jersey.

***Edaphodon latidens* (Cope).**

Cope, E. D. 1875 E, p. 283. (*Diphrissa*.)

Woodward, A. S. 1891 A, p. 86.

Cretaceous; New Jersey.

***Edaphodon longirostris* (Cope).**

Cope, E. D. 1875 E, pp. 284, 287. (*Ischyodus*.)

Woodward, A. S. 1891 A, p. 85.

Cretaceous; New Jersey.

***Edaphodon miersii* (Marsh).**

Marsh, O. C. 1870 E, p. 230. (*Dipristis*.)

Cope, E. D. 1875 E, pp. 285, 292. (*Ischyodus*.)

Woodward, A. S. 1891 A, p. 85.

Cretaceous; New Jersey.

***Edaphodon mirificus* Leidy.**

Leidy, J. 1856 K, p. 221.

Cope, E. D. 1875 E, pp. 285, 291. (*Ischyodus*.)

Leidy, J. 1873 B, pp. 306, 350, pl. xxxvii, figs. 6-12.

Newton, E. T. 1878 C, p. 24.

Woodward, A. S. 1891 A, p. 85.

Cretaceous; New Jersey.

***Edaphodon monolophus* (Cope).**

Cope, E. D. 1869 L, p. 314. (*Ischyodus*.)

1875 E, pp. 285, 289. (*Ischyodus*.)

Woodward, A. S. 1891 A, p. 85.

Cretaceous; New Jersey.

***Edaphodon smockii* (Cope).**

Cope, E. D. 1869 L, p. 316. (*Ischyodus*.)

1875 E, pp. 284, 288. (*Ischyodus*.)

Woodward, A. S. 1891 A, p. 85.

Cretaceous; New Jersey.

Edaphodon solidulus (Cope).

Cope, E. D. 1869 F, p. 244. (Ischyodus.)
1875 E, p. 283. (Diphrissa.)
1875 K. (Diphrissa.)

Woodward, A. S. 1891 A, p. 86.
Cretaceous; New Jersey.

Edaphodon stenobryus (Cope).

Cope, E. D. 1875 E, p. 285. (Ischyodus.)

Woodward, A. S. 1891 A, p. 85.
Cretaceous; New Jersey.

Edaphodon tripartitus (Cope).

Cope, E. D. 1875 E, pp. 284, 286. (Ischyodus.)
1869 L, p. 314. (I. mirificus, *errore*.)
Woodward, A. S. 1891 A, p. 85.
Cretaceous; New Jersey.

MYLOGNATHUS Leidy. Type *M. priscus* Leidy.

Leidy, J. 1856 Q, p. 312.
1860 A, p. 153.

Nicholson and Lydekker 1889 A, p. 951.
Woodward, A. S. 1891 A, p. 86. (Syn. of Edaphodon.)

Mylognathus priscus Leidy.

Leidy, J. 1856 Q, p. 312.
Cope, E. D. 1875 E, p. 293.
Leidy, J. 1860 A, p. 153, pl. xi, figs. 24-30.
Woodward, A. S. 1891 A, p. 86. (Edaphodon?).
Eocene (Fort Union); Nebraska.

BRYACTINUS Cope. Type *B. amorphus* Cope.

Cope, E. D. 1875 E, p. 282.
Nicholson and Lydekker 1889 A, p. 951.
Woodward, A. S. 1891 A, p. 86. (Syn. ? of Edaphodon.)

Bryactinus amorphus Cope.

Cope, E. D. 1875 E, p. 282, pl. xlv, fig. 12.
Woodward, A. S. 1891 A, p. 86. (Edaphodon?).
Cretaceous; New Jersey.

ISOTÆNIA Cope. Type *I. neocæsariensis* Cope.

Cope, E. D. 1875 E, p. 293.
Nicholson and Lydekker 1889 A, p. 951.
Woodward, A. S. 1891 A, p. 86. (Syn. ? of Edaphodon.)

Isotænia neocæsariensis Cope.

Cope, E. D. 1875 E, p. 293.
Woodward, A. S. 1891 A, p. 86. (Edaphodon?).
Cretaceous; New Jersey.

LEPTOMYLUS Cope. Type *L. densus* Cope.

Cope, E. D. 1869 L, p. 313.
1875 E, p. 281.
Nicholson and Lydekker 1889 A, p. 951.
Woodward, A. S. 1891 A, p. 87.

Leptomylus cookii Cope.

Cope, E. D. 1870 H, p. 384.
1875 E, p. 382.
Woodward, A. S. 1891 A, p. 87.
Cretaceous; New Jersey.

Leptomylus densus Cope.

Cope, E. D. 1869 L, p. 313.
1875 E, p. 281.
Woodward, A. S. 1891 A, p. 86.
Cretaceous; New Jersey.

Leptomylus forfex Cope.

Cope, E. D. 1875 E, p. 281.
Woodward, A. S. 1891 A, p. 87.
Cretaceous; New Jersey.

SPHAGEPŒA Cope. Type *S. aciculata* Cope.

Cope, E. D. 1869 F, p. 241.
1875 E, p. 293.
Woodward, A. S. 1891 A, p. 84.

Sphagepœa aciculata Cope.

Cope, E. D. 1869 F, p. 241.
1875 E, p. 293.

Woodward, A. S. 1891 A, p. 84.
Cretaceous; New Jersey.

DICTYORHABDUS Walcott. Type *D. priscus* Walcott.

Walcott, C. D. 1892 A, p. 165.
Amer. Geologist, 1891 E. (Palæchimæra; no definition.)
The position of the genus is doubtful.

Dictyorhabdus priscus Walcott.

Walcott, C. D. 1892 A, p. 165, pl. iii, figs. 1-5.

Amer. Geologist 1891 E. (Palæchimæra prisca; no description.)
Cope, E. D. 1893 I.
Dana, J. D. 1896 A, p. 509, fig. 697.
Silurian (Ordovician); Colorado.

MYLEDAPHUS Cope. Type *M. bipartitus* Cope.

Cope, E. D. 1876 H, p. 260.

Myledaphus bipartitus Cope.

Cope, E. D. 1876 H, p. 260.

1877 G, p. 574.

Cretaceous (Fort Union); Montana.

The relationships of this fossil are doubtful.

HEDRONCHUS Cope. Type *H. sternbergi* Cope.

Cope, E. D. 1876 H, p. 259.

Hedronchus sternbergi Cope.

Cope, E. D. 1876 H, p. 259.

1877 G, p. 574.

1880 Q.

Cretaceous (Ft. Union); Montana.

The relationships of this fossil are extremely problematical.

ICHTHYODORULITES.

Agassiz, L. 1843 B, iii, pp. 1, 67, 69, 212.

1844 B, p. 111.

Hay, O. P. 1899 F, p. 682.

Jaekel, O. 1890 D.

Koninck, L. G. de 1878 A, p. 65.

Newberry and Worthen 1866 A, pp. 113-127.

Pictet, F. J. 1854 A, p. 229.

St. John and Worthen 1875 A, pp. 420-488

1883 A, pp. 233-260.

Woodward, A. S. 1891 A, pp. 92-159.

Zittel, K. A. 1890 A, pp. 115-122.

ONCHUS Agassiz. Type *O. murchisoni* Agassiz.

Agassiz, L. 1843 B (1837), iii, p. 6.

1843 A.

1844 A.

1844 B, p. 117.

Eichwald E. 1860 A, p. 1594.

Hasse, C. 1878 A, p. 144.

1879 A, p. 59.

McCoy, F. 1855 A, p. 577.

Nicholson and Lydekker 1889 A, p. 940.

Owen, R. 1860 E, p. 100.

Pictet, F. J. 1854 A, p. 283.

Reis, O. M. 1896 A.

Rohon, V. 1893 A, p. 38, with figures.

1899 A, p. 9.

Traquair, R. H. 1899 A, p. 843.

Woodward, A. S. 1891 A, p. 94.

Zittel, K. A. 1890 A, pp. 64, 67, 166.

Onchus clintoni Clappole. *

Clappole, E. W. 1885 D, p. 61, fig. 6.

1884 A, p. 1225. (No description).

1895 G.

Lesley, J. P. 1892 A, p. 774.

Woodward, A. S. 1891 A, p. 96.

Zittel, K. A. 1890 A, p. 317. (*O. clintonensis*.)

Silurian (Clinton); Pennsylvania.

Onchus pennsylvanicus Clappole.

Clappole, E. W. 1885 D, p. 61, fig. 5.

1885 A, p. 426.

1885 C.

Lesley, J. P. 1892 A, p. 774.

Upper Silurian; Pennsylvania.

Onchus rectus Eastman.

Eastman, C. R. 1899 F, p. 323, fig. 4.

Devonian (Catskill); New York.

CTENACANTHUS Agassiz. Type *C. major* Agassiz.

Agassiz, L. 1843 B (1837), iii, p. 10.

1843 A.

1844 A.

1844 B, p. 119.

American Geologist 1888 A.

Barkas, W. J. 1874 A, p. 386.

1878 B, p. 145.

Clappole, E. W. 1885 B.

1895 C.

Davis, J. W. 1883 A, p. 332.

Garman, S. 1884 C.

Gill, T. 1884 C.

McCoy, F. 1855 A, p. 624.

Koninck L. G. de 1878 A, p. 65.

Miller, S. A. 1889 A, p. 593.

Newberry, J. S. 1873 A, pp. 279, 325.

1873 C, p. 27.

1889 A, p. 197.

Newberry and Worthen 1866 A, pp. 116, 118.

Nicholson and Lydekker 1889 A, pp. 940, 968.

Pictet, F. J. 1854 A, p. 299.

St. John and Worthen 1875 A, p. 432.

Thompson J. 1870 A.

1871 A.

Traquair, R. H. 1884 B.

1888 A, p. 81.

Woodward, A. S. 1884 A, p. 267.

1891 A, p. 97.

Woodward and Sherborn 1890 A, p. 49.
Zittel, K. A. 1890 A, pp. 67, 116.

Ctenacanthus acutus Eastman.

Eastman, C. R. 1897 B, p. 12, fig. 2.
Subcarboniferous (Keokuk); Iowa.

Ctenacanthus amblyxiphias Cope.

Cope, E. D. 1891 B, p. 449, pl. xxviii, fig. 3.
Permian; Texas.

Ctenacanthus angulatus Newb. and Worth.

Newberry and Worthen 1866 A, p. 118, pl. xii, figs. 4, 4a.

Woodward, A. S. 1891 A, p. 102.
Subcarboniferous (Chester); Illinois.

Ctenacanthus angustus Newb.

Newberry, J. S. 1889 A, p. 181.
Claypole, E. W. 1896 E, p. 151, figs. 1, 2.
Woodward, A. S. 1891 A, p. 102.
Devonian (Cleveland shale); Ohio.

Ctenacanthus burlingtonensis St. J. and Worth.

St. John and Worthen 1875 A, p. 426, pl. xv, figs. 6, 7.
Woodward, A. S. 1891 A, p. 102.
Subcarboniferous (Burlington); Iowa, Illinois.

Ctenacanthus buttersi St. J. and Worth.

St. John and Worthen 1883 A, p. 241, pl. xxvi, fig. 2.
Woodward, A. S. 1891 A, p. 102.
Coal-measures; Illinois.

Ctenacanthus cannaliratus St. J. and Worth.

St. John and Worthen 1883 A, p. 239, pl. xxi, fig. 3.
Woodward, A. S. 1891 A, p. 102.
Subcarboniferous (Chester); Illinois.

Ctenacanthus chemungensis Claypole.

Claypole, E. W. 1885 B, p. 490. (Inadequate description.)
Devonian (Chemung); Pennsylvania.

Ctenacanthus clarkii Newb.

Newberry, J. S. 1889 A, p. 168, pl. xxvi, figs. 2, 3.
Woodward, A. S. 1891 A, p. 102.
Devonian (Cleveland shale); Ohio.

Ctenacanthus compressus Newb.

Newberry, J. S. 1878 A, p. 191.
1889 A, p. 168, pl. xxiii, fig. 4.
Woodward, A. S. 1891 A, p. 103.
Devonian (Cleveland shale); Ohio.

Ctenacanthus coxianus St. J. and Worth.

St. John and Worthen 1883 A, p. 233, pl. xxi, fig. 1.
Eastman, C. R. 1897 B, p. 13.
Woodward, A. S. 1891 A, p. 103.
Subcarboniferous (Keokuk); Iowa.

Ctenacanthus cylindricus Newb.

Newberry, J. S. 1889 A, p. 202, pl. xxxvi, fig. 1.
Eastman, C. R. 1897 B, p. 13.
Woodward, A. S. 1891 A, p. 103.
Subcarboniferous (Keokuk); Kentucky.

Ctenacanthus deflexus St. J. and Worth.

St. John and Worthen 1883 A, p. 234 pl. xxii, fig. 1.
Woodward, A. S. 1891 A, p. 103.
Subcarboniferous (St. Louis); Illinois.

Ctenacanthus depressus Newb.

Newberry, J. S. 1897 A, p. 290, pl. xxii, fig. 6.
Subcarboniferous (Kinderhook); Iowa.

Ctenacanthus elegans Tuomey.

Tuomey, M. 1858 A, p. 38, text-fig. A.
Woodward, A. S. 1891 A, p. 103.
Subcarboniferous; Alabama.

Ctenacanthus excavatus St. J. and Worth.

St. John and Worthen 1875 A, p. 428, pl. xv, figs. 4, 5.
Eastman, C. R. 1897 B, p. 13.
Keyes, C. R. 1894 A, p. 236.
Woodward, A. S. 1891 A, p. 103.
Subcarboniferous (Keokuk); Missouri, Iowa.

Ctenacanthus? fallax Woodward.

Woodward, A. S. 1891 A, p. 105. (Ex Leidy MS. "Indeterminate.")
Leidy J. 1857 G, pl. v. fig. 30. (No name or description).
Subcarboniferous; ———.

Ctenacanthus formosus Newb.

Newberry, J. S. 1873 A, p. 328, pl. 36, figs. 2-2b.
1875 A, p. 53, pl. lix, figs. 1-1c.
Woodward, A. S. 1891 A, p. 103.
Subcarboniferous (Waverly); Ohio, Kentucky.

Ctenacanthus furcicarinatus Newb.

Newberry, J. S. 1875 A, p. 54, pl. lix, figs. 2-2c.
Koninek, L. G. de 1878, A, p. 68.
Newberry, J. S. 1873 A, p. 279. (No description; teeth=? *Orodus variabilis*.)
Woodward, A. S. 1891 A, p. 103.
Subcarboniferous (Waverly); Kentucky.

Ctenacanthus gemmatus St. J. and Worth.

St. John and Worthen 1875 A, p. 429, pl. xv, figs. 9, 10.
Woodward, A. S. 1891 A, p. 103.
Subcarboniferous (St. Louis); Illinois.

Ctenacanthus gradocostatus St. J. and Worth.

St. John and Worthen 1875 A, p. 425, pl. xv, figs. 2, 3.
Woodward, A. S. 1891 A, p. 103.
Subcarboniferous (Burlington); Illinois, Iowa.

Ctenacanthus gurleyi Newb.

Newberry, J. S. 1897 A, p. 290.
Subcarboniferous (St. Louis); Indiana.

Ctenacanthus harrisoni St. J. and Worth.*St. John and Worthen* 1883 A, p. 236, pl. xxiii, fig. 1.

Woodward, A. S. 1891 A, p. 103.

Subcarboniferous (St. Louis); Illinois.

Ctenacanthus keokuk St. J. and Worth.*St. John and Worthen* 1875 A, p. 427, pl. xv, fig. 8.

Eastman, C. R. 1897 B, p. 13.

Keyes, C. R. 1894 A, p. 236.

Woodward, A. S. 1891 A, p. 103.

Subcarboniferous (Keokuk); Missouri, Illinois, Iowa.

Ctenacanthus littoni Newb.*Newberry, J. S.* 1889 A, p. 201, pl. xxv, fig. 3.

Woodward, A. S. 1891 A, p. 103.

Subcarboniferous (St. Louis); Missouri.

Ctenacanthus marshii Newb.*Newberry, J. S.* 1873 A, p. 326, pl. xxvi, figs. 3, 3b.

Woodward, A. S. 1891 A, p. 104.

Coal-measures; Ohio.

Ctenacanthus mayi Newb. and Worth.*Newberry and Worthen* 1870 A, p. 372, pl. ii, figs. 2, 2a; also p. 346.

Woodward, A. S. 1891 A, p. 104.

Subcarboniferous (Burlington); Iowa.

Ctenacanthus pellensis St. J. and Worth.*St. John and Worthen* 1883 A, p. 237, pl. xxi, fig. 2.

Woodward, A. S. 1891 A, p. 104.

Subcarboniferous (St. Louis); Iowa.

Ctenacanthus pugiunculus St. J. and Worth.*St. John and Worthen* 1875 A, p. 430, pl. xxi, fig. 9.

Keyes, C. R. 1894 A, p. 236.

Newberry, J. S. 1897 A, p. 288, pl. xxii, fig. 4. (Oracanthus.)

Woodward, A. S. 1891 A, p. 104.

Subcarboniferous (St. Louis); Missouri, Illinois.

Ctenacanthus randalli Newb.*Newberry, J. S.* 1889 A, p. 105.

Woodward, A. S. 1891 A, p. 104.

Devonian (Chemung); Pennsylvania.

Ctenacanthus sculptus St. J. and Worth.*St. John and Worthen* 1875 A, p. 421, pl. xiv, fig. 1.**ANACLITACANTHUS** St. J. and Worth.*St. John and Worthen* 1875 A, p. 442.

Miller, S. A. 1889 A, p. 587.

Anaclitacanthus semicostatus St. J. and Worth.*St. John and Worthen* 1875 A, p. 443, pl. xvi, fig. 14.

Woodward, A. S. 1891 A, p. 104.

Subcarboniferous (Kinderhook); Iowa.

Ctenacanthus similis St. J. and Worth.*St. John and Worthen* 1875 A, p. 431, pl. xv, figs. 11-11d.

Woodward, A. S. 1891 A, p. 104.

Subcarboniferous (Chester); Illinois.

Ctenacanthus speciosus St. J. and Worth.*St. John and Worthen* 1875 A, p. 424, pl. xiv, figs. 3, 4.

Davis, J. W. 1883 A, p. 340.

Woodward, A. S. 1891 A, p. 104.

Subcarboniferous (Kinderhook); Iowa.

Ctenacanthus spectabilis St. J. and Worth.*St. John and Worthen* 1875 A, p. 420, pl. xv, figs. 1-1e.

Woodward, A. S. 1891 A, p. 104.

Subcarboniferous (Kinderhook); Iowa.

Ctenacanthus triangularis Newb.*Newberry, J. S.* 1873 A, p. 329, pl. 36, figs. 1-1b.

Miller, S. A. 1889 A, p. 593, fig. 1118.

Trautschold, H. 1879 B, p. 61, pl. vii, fig. 15.

Woodward, A. S. 1891 A, p. 104.

Subcarboniferous (Waverly); Ohio; also in Russia.

Ctenacanthus varians St. J. and Worth.*St. John and Worthen* 1875 A, p. 422, pl. xiv, fig. 12.

Woodward, A. S. 1891 A, p. 104.

Subcarboniferous (Kinderhook); Iowa.

Ctenacanthus vetustus Newb.*Newberry, J. S.* 1873 A, p. 326, pl. xxxv, figs. 3-3d.

Claypole, E. W. 1885 B, p. 489.

Woodward, A. S. 1891 A, p. 104.

Devonian (Huron shale); Ohio.

Ctenacanthus wrighti Newb.*Newberry, J. S.* 1884 B, p. 206, pl. xvi, figs. 12-14.

1889 A, p. 66, pl. xxvi, fig. 4.

Woodward, A. S. 1891 A, p. 104.

Devonian (Hamilton); New York.

Ctenacanthus xiphias (St. J. and Worth.).*St. John and Worthen* 1883 A, p. 244, pl. xxvi, fig. 1. (Acondylacanthus.)

Eastman, C. R. 1897 B, p. 10, fig. 1.

Woodward, A. S. 1891 A, p. 110. (Acondylacanthus.)

Subcarboniferous (Keokuk); Iowa.

Type *A. semicostatus* St. J. and Worth.

Woodward, A. S. 1891 A, p. 105.

Subcarboniferous (Burlington); Iowa.

EUNEMACANTHUS St. J. and Worth. Type *E. costatus* (Newb. and Worth.).

St. John and Worthen 1883 A, p. 246.

Miller, S. A. 1889 A, p. 597.

Eunemacanthus costatus (Newb. and Worth.).

Newberry and Worthen 1866 A, p. 120, pl. xii, fig. 5.
(*Ctenacanthus?* *costatus*.)

Hambach, G. 1890 A, p. 80.

St. John and Worthen 1883 A, p. 246, pl. xxiii, fig. 2.

Woodward, A. S. 1891 A, p. 105.

Subcarboniferous (St. Louis); Illinois, Missouri (*vide* Hambach).

HOMACANTHUS Agassiz. Type *H. arcuatus* Agassiz.

Agassiz, L. 1844 B, p. 113.

Newberry and Worthen 1866 A, p. 113.

Nicholson and Lydekker 1889 A, p. 968.

Owen, R. 1860 E, p. 101.

Pictet, F. J. 1854 A, p. 288.

Woodward, A. S. 1891 A, p. 105.

Homacanthus gracilis Whiteaves.

Whiteaves, J. W. 1889 A, p. 96, pl. x, fig. 4.

McCoy, F. 1855 A, p. 632.

Traquair, R. H. 1890 A, p. 21. (*Climacius*.)

Whiteaves, J. F. 1881 E, p. 106. (H. sp. undet.)

1883 A, p. 355. (H. sp.?)

1883 B, p. 164. (H. sp. undet.)

Woodward, A. S. 1891 A, p. 106.

Lower Devonian; New Brunswick.

AMACANTHUS St. J. and Worth. Type *A. gibbosus* (Newb. and Worth.).

St. John and Worthen 1875 A, p. 464.

Miller, S. A. 1889 A, p. 587.

Amacanthus gibbosus (Newb. and Worth.).

Newberry and Worthen 1866 A, p. 113, pl. xii, fig. 1.
(*Homacanthus*.)

Keyes, C. R. 1894 A, p. 237.

Miller, S. A. 1889 A, p. 587.

St. John and Worthen 1875 A, p. 464, pl. xxii, fig. 6.

Woodward, A. S. 1891 A, p. 106.

Subcarboniferous (St. Louis); Missouri, Illinois.

MARRACANTHUS St. J. and Worth. Type *M. rectus* (Newb. and Worth.).

St. John and Worthen 1875 A, p. 465.

Keyes, C. R. 1894 A, p. 237.

Miller, S. A. 1889 A, p. 601.

Marracanthus rectus (Newb. and Worth.).

Newberry and Worthen 1866 A, p. 115, pl. xii, fig. 6.
(*Homacanthus?*)

Miller, S. A. 1889 A, p. 602, fig. 1147.

St. John and Worthen 1875 A, p. 466, pl. xxii, figs. 7-9.

Woodward, A. S. 1891 A, p. 106.

Subcarboniferous (St. Louis); Missouri, Illinois.

HOPLONCHUS J. W. Davis. Type *H. elegans* J. W. Davis.

Davis, J. W. 1876, Quart. Jour. Geol. Soc., xxxii, p. 336.

1879, Quart. Jour. Geol. Soc., xxxv, p. 181.

Newberry, J. S. 1889 A, p. 169.

Woodward, A. S. 1891 A, p. 107.

Hoplonchus parvulus Newb.

Newberry, J. S. 1875 A, p. 55, pl. lix, fig. 3.
(*Ctenacanthus*.)

1889 A, p. 169, pl. xxv, fig. 5.

Woodward, A. S. 1891 A, p. 107.

Devonian (Cleveland shale); Ohio.

ACONDYLACANTHUS St. J. and Worth. Type *A. gracilis* St. J. and Worth.

St. John and Worthen 1875 A, p. 432.

Davis, J. W. 1883 A, p. 346.

Miller, S. A. 1889 A, p. 586.

Woodward, A. S. 1886 E, p. 4.

1891 A, p. 107.

Woodward and Sherborn 1890 A, p. 4.

Zittel, K. A. 1890 A, p. 117.

Acondylacanthus æquicostatus St. J. and Worth.

St. John and Worthen 1875 A, p. 434, pl. xvi, figs. 12, 13.

Woodward, A. S. 1891 A, p. 109.

Subcarboniferous (Keokuk); Iowa.

Acondylacanthus gracilis St. J. and Worth.

St. John and Worthen 1875 A, p. 433, pl. xvi, figs. 8-11.

Miller, S. A. 1889 A, p. 586, fig. 1099.

Woodward, A. S. 1891 A, p. 109.

Subcarboniferous (Kinderhook); Iowa.

Acondylacanthus gracillimus (Newb. and Worth.).

Newberry and Worthen 1866 A, p. 126, pl. xiii, fig. 3. (*Ctenacanthus*.)

Keyes, C. R. 1894 A, p. 236. (*Ctenacanthus*.)

Newberry, J. S. 1889 A, p. 206, pl. xxv, fig. 6. (A. occidentalis.)

Newberry and Worthen 1866 A, p. 116, pl. xii, fig. 2. (Leptacanthus? occidentalis.)

St. John and Worthen 1875 A, p. 435. (A. occidentalis.)

1883 A, p. 238, pl. xxiv, fig. 1. (Ctenacanthus.)

Woodward, A. S. 1891 A, p. 109. (A. occidentalis.) Subcarboniferous (St. Louis); Missouri, Illinois, Michigan.

Acondylacanthus? mudgianus St. J. and Worth.

St. John and Worthen, 1883 A, p. 244, pl. xxiv, fig. 3.

ASTEROPTYCHIUS McCoy.

McCoy, F. 1848 A, p. 118.

Agassiz, L. 1843 B, iii, p. 176. (Name only). 1844 A.

McCoy, F. 1855 A, p. 615.

Miller, S. A. 1889 A, p. 588.

Newberry, J. S. 1889 A, p. 186.

Woodward, A. S. 1891 A, p. 110.

Zittel, K. A. 1890 A, p. 117.

Asteroptychius bellulus St. J. and Worth.

St. John and Worthen 1875 A, p. 439, pl. xvi, fig. 7. Woodward, A. S. 1891 A, p. 111.

Coal-measures: Illinois, Iowa.

Asteroptychius elegans Newb.

Newberry, J. S. 1889 A, p. 176, pl. xxv, fig. 4.

Woodward, A. S. 1891 A, p. 111.

Subcarboniferous (Waverly); Michigan.

Asteroptychius gracilis Newb.

Newberry, J. S. 1897 A, p. 293.

Subcarboniferous (St. Louis); Illinois.

Asteroptychius keokuk St. J. and Worth.

St. John and Worthen 1875 A, p. 436, pl. xvi, fig. 2. Woodward, A. S. 1891 A, p. 111.

Subcarboniferous (Keokuk); Illinois.

Asteroptychius sancti-ludovici St. J. and Worth.

St. John and Worthen 1875 A, p. 437, pl. xvi, figs. 3, 4.

COSMACANTHUS Agassiz. Type *C. malcolmsoni* Agassiz.

Agassiz, L. 1844 B, p. 120.

Miller, S. A. 1889 A, p. 598. (Gisacanthus.)

Pictet, F. J. 1854 A, p. 287.

St. John and Worthen 1875 A, p. 440. (Geisacanthus, type *G. stellatus*.)

Woodward, A. S. 1891 A, p. 111.

Woodward and Sherborn 1890 A, p. 47.

Zittel, K. A. 1890 A, p. 117.

Cosmacanthus bullatus (St. J. and Worth.).

St. John and Worthen 1875 A, p. 441, pl. xvii, figs. 3, 4. (Geisacanthus.)

Woodward, A. S. 1891 A, p. 110. Coal-measures; Kansas.

Acondylacanthus nuperus St. J. and Worth.

St. John and Worthen 1883 A, p. 242, pl. xxvi, fig. 3. Woodward, A. S. 1891 A, p. 110.

Coal-measures; Illinois.

Acondylacanthus rectus St. J. and Worth.

St. John and Worthen 1883 A, p. 241, pl. xxvi, fig. 2. Woodward, A. S. 1891 A, p. 109.

Coal-measures; Illinois.

Type *A. ornatus* McCoy.

Keyes, C. R. 1894 A, p. 236.

Woodward, A. S. 1891 A, p. 111.

Subcarboniferous (St. Louis); Illinois, Missouri.

Asteroptychius tenellus St. J. and Worth.

St. John and Worthen 1883 A, p. 248, pl. xxi, fig. 4. Woodward, A. S. 1891 A, p. 111.

Coal-measures: Kansas.

Asteroptychius? tenuis St. J. and Worth.

St. John and Worthen 1875 A, p. 438, pl. xvi, figs. 5, 6.

Woodward, A. S. 1891 A, p. 111.

Subcarboniferous (Chester); Illinois.

Asteroptychius triangularis Newb. and Worth.

Newberry and Worthen 1870 A, p. 370, pl. ii, fig. 4. Woodward, A. S. 1891 A, p. 111.

Subcarboniferous (Burlington); Iowa.

Asteroptychius vetustus St. J. and Worth.

St. John and Worthen 1875 A, p. 435, pl. xvi, fig. 1. Woodward, A. S. 1891 A, p. 111.

Subcarboniferous (Kinderhook); Iowa.

Woodward, A. S. 1891 A, p. 112. Subcarboniferous (Chester); Illinois.

Cosmacanthus stellatus (St. J. and Worth.).

St. John and Worthen 1875 A, p. 440, pl. xxi, fig. 10. (Geisacanthus.)

Keyes, C. R. 1894 A, p. 236. (Geisacanthus.)

Woodward, A. S. 1891 A, p. 113.

Subcarboniferous (St. Louis); Missouri.

BYTHIACANTHUS St. J. and Worth. Type *B. vanhornei* St. J. and Worth. ,

St. John and Worthen 1875 A, p. 444.

Miller, S. A. 1889 A, p. 589.

Newberry, J. S. 1889 A, p. 186.

Bythiacanthus *p. siderius* (Leidy).

Leidy, J. 1870 H, p. 13. (*Asteracanthus*.) 1873 B, pp. 313, 353, pl. xxxii, fig. 59. (*Asteracanthus*.)

St. John and Worthen 1875 A, p. 445.

Woodward, A. S. 1889 D, p. 320.

1891 A, p. 113.

Subcarboniferous; Tennessee.

Bythiacanthus *vanhornei* St. J. and Worth.

St. John and Worthen 1875 A, p. 445, pl. xvii, fig. 1.

Woodward, A. S. 1891 A, p. 113.

Subcarboniferous (St. Louis); Illinois.

GLYMMATACANTHUS St. J. and Worth. Type *G. irishii* St. J. and Worth.

St. John and Worthen 1875 A, p. 446.

Miller, S. A. 1889 A, p. 598.

Newberry, J. S. 1889 A, p. 186.

Glymmatacanthus *irishii* St. J. and Worth.

St. John and Worthen 1875 A, p. 447, pl. xvii, fig. 2.

Miller, S. A. 1889 A, p. 598, fig. 1133.

Woodward, A. S. 1891 A, p. 113.

Subcarboniferous (Kinderhook); Iowa.

Glymmatacanthus *petrodoides* St. J. and Worth.

St. John and Worthen 1883 A, p. 250, pl. xxv, fig. 2.

Woodward, A. S. 1891 A, p. 113.

Subcarboniferous (Chester); Illinois.

Glymmatacanthus *rudis* St. J. and Worth.

St. John and Worthen 1883 A, p. 249, pl. xxv, fig. 1.

Woodward, A. S. 1891 A, p. 113.

Subcarboniferous (Keokuk); Iowa.

APATEACANTHUS Woodward. Type *A. vetustus* (Clarke).

Woodward, A. S. 1891 A, p. 118.

Apateacanthus *vetustus* (Clarke, J. M.).

Clarke, J. M. 1885 A, p. 42, pl. i, fig. 7. (*Pristacanthus*.)

Lesley, J. P., 1889 A, p. 744, figure. (*Pristacanthus*.)

Newberry, J. S. 1889 A, p. 61.

Woodward, A. S. 1891 A, p. 119.

Devonian (Genesee); New York.

CÆLORHYNCHUS Agassiz.

Agassiz, L. 1843 B, v. p. 92.

1844 A.

Cope, E. D. 1890 A.

Gibbes, R. W. 1850 A.

Leidy, J. 1856 A, p. 422. (*Cylindracanthus*.)

1856 E, p. 12. (*Cylindracanthus*; type *C. ornatus*.)

Marsh, O. C. 1870 E, p. 228.

Reis, O. M. 1895 C, p. 182.

Williamson, W. C. 1849 A, p. 471, pl. xliii, figs. 35-37.

Woodward, A. S. 1888 G.

1891 A, p. 120.

Type *C. rectus* Agassiz.

Zittel, K. A. 1890 A, pp. 122, 258.

This genus probably belongs to the *Sclerodermi*.

Cœlorhynchus *acus* Cope.

Cope, E. D. 1870 F, p. 294.

Eocene; New Jersey.

Cœlorhynchus *ornatus* Leidy.

Leidy, J. 1856 E, p. 12. (*Cylindracanthus*.)

1856 A, p. 422. (*Cylindracanthus*.)

1856 O, p. 302. (*Cœlorhynchus*.)

Woodward, A. S. 1891 A, p. 122.

Eocene; Alabama.

MACHÆRACANTHUS Newb.

Newberry, J. S. 1857 C, p. 125.

Fritsch, A. 1895 A (1893), p. 72.

Hopkins, W., 1855 A. (No name.)

Jaekel, O. 1893 B, p. 175.

Miller, S. A. 1889 A, p. 601.

Newberry, J. S. 1857 A, p. 148.

1862 A, p. 76, fig. 2.

1873 A, pp. 264, 302.

1873 C, p. 27.

1875 A, p. 57.

1889 A, p. 37.

Type *M. perucutus* Newb.

Nicholson and Lydekker 1889 A, p. 947.

Reis, O. M. 1896 A.

Roualt, M. 1858 A, p. 102. (*Machærius*, preoccupied.)

Traquair, R. H. 1893 B, p. 177.

Woodward, A. S. 1891 A, p. 123.

Zittel, K. A. 1890 A, p. 116.

Machæracanthus *major* Newb.

Newberry, J. S. 1857 C, p. 125.

Lesley, J. P. 1892 A, pl. cl.

- Newberry, J. S. 1873, A, pp. 262, 304, pl. xxv, fig. 2.
1889 A, p. 39, pl. xxix, fig. 4.
Woodward, A. S. 1891 A, p. 124.
Zittel, K. A. 1890 A, p. 116, fig. 124.
Devonian (Corniferous); Ohio.

Machæracanthus peracutus Newb.

- Newberry, J. S. 1857 C, p. 125.
Hopkins, W. 1854 A. (No name).
Miller, S. A. 1889 A, p. 601, fig. 1145.
Newberry, J. S. 1862 A, fig. 2.
1873 A, p. 305, pl. xxix, fig. 6.
1889 A, p. 40, pl. xxix, fig. 6.
Woodward, A. S. 1891 A, p. 124.
Devonian (Corniferous); Ohio.

Machæracanthus sulcatus Newb.

- Newberry, J. S. 1857 C, p. 126.
Hall, J. 1843 A, p. 174, fig. 69. ("Ichthyodorulite.")
Jaekel, O. 1893 B, p. 175.
Lankester, E. R. 1870 A, fig. 3.
Lennox, T. H. 1886 A, p. 120.
Lesley, J. P. 1889 A, p. 298, figure. ("Ichthyodorulite.")
Newberry, J. S. 1873 A, pp. 264, 305.
1889 A, p. 40, pl. xxix, fig. 4.
Woodward, A. S. 1891 A, p. 124.
Devonian (Corniferous); Ohio.

GAMPHACANTHUS S. A. Miller. Type *H. politus* Newb.

- Miller, S. A. 1892 A, p. 715.
Hay, O. P. 1899 E, p. 791.
Newberry, J. S. 1889 A, p. 65. (Heteracanthus, type *H. politus*; preoccupied.)
Woodward, A. S. 1891 A, p. 125. (Heteracanthus.)

Gamphacanthus politus (Newb.).

- Newberry, J. S. 1889 A, p. 66, pl. xxi, figs. 4, 5. (Heteracanthus.)
Eastman, C. R. 1898 B, p. 552. (Heteracanthus.)
1899 B, p. 282. (Heteracanthus.)

- Miller, S. A. 1892 A, p. 715.
Woodward, A. S. 1891 A, p. 125. (Heteracanthus.)
Devonian (Hamilton); Wisconsin.

Gamphacanthus uddeni (Lindahl).

- Lindahl, J. 1897 A, p. 95, pl. vi. (Heteracanthus.)
Eastman, C. R. 1898 B, p. 557. (Heteracanthus.)
1899 B, pp. 278, 282. (Heteracanthus.)
Devonian (Hamilton); Iowa, Wisconsin, Illinois.

ACANTHASPIS Newb. Type *A. armatus* Newb.

- Newberry, J. S. 1875 A, p. 36.
Jaekel, O. 1893 B, p. 175.
Miller, S. A. 1889 A, p. 586.
Newberry, J. S. 1870 B, p. 153.
1889 A, p. 35.
Traquair, R. H. 1893 A, p. 149.
1893 D, p. 117.
1894 B, p. 370.
Woodward, A. S. 1891 A, p. 128.
1892 C, p. 482.
1892 F, fig. 8.

- Woodward, A. S. 1898 B, p. 16.
Zittel, K. A. 1890 A, p. 157.

Acanthaspis armata Newb.

- Newberry, J. S. 1875 A, p. 37, pl. lv, figs. 1-6.
Claypole, E. W. 1896 B, p. 354.
Miller, S. A. 1889 A, p. 586, fig. 1097.
Newberry, J. S. 1889 A, p. 36, pl. xxxi; figs. 1-4.
Traquair, R. H. 1894 B, p. 370.
Woodward, A. S. 1891 A, p. 129.
Devonian (Corniferous); Ohio.

ECZEMATOLEPIS S. A. Miller. Type *Acantholepis pustulosus* (Newb.).

- Miller, S. A. 1892 A, p. 715.
Hay, O. P. 1899 E, p. 791.
Jaekel, O. 1893 B, p. 175. (Acantholepis.)
Miller, S. A. 1889 A, p. 586. (Acantholepis.)
Newberry, J. S. 1875 A, p. 38. (Acantholepis, type *A. pustulosus*; preoccupied.)
1889 A, p. 33. (Acantholepis.)
Woodward, A. S. 1891 A, p. 128. (Acantholepis.)
Zittel, K. A. 1890 A, p. 157. (Acantholepis.)

Eczematolepis fragilis (Newb.).

- Newberry, J. S. 1857 C, p. 126. (Oracanthus fragilis, O. granulatus, O. abbreviatus.)

- Eastman, C. R. 1899 B, p. 283. (Acantholepis.)
Miller, S. A. 1889 A, p. 586, fig. 1098. (Acantholepis.)
1892 A, p. 715. (Eczematolepis.)
Newberry, J. S. 1875 A, p. 38, pl. lvi, figs. 1-6. (Acantholepis pustulosus.)
1875 A, p. 39. (Oracanthus fragilis, granulatus, abbreviatus.)
1889 A, p. 34, pl. xxxi, figs. 5-5b. (Acantholepis pustulosus.)
Woodward, A. S. 1891 A, p. 129. (Acantholepis pustulosus.)
Devonian (Corniferous); Ohio, New York.

PHLYCTENACANTHUS Eastman. Type *P. telleri* Eastman.

- Eastman, C. R. 1898 B, p. 552.

Phlyctenacanthus telleri Eastman.

- Eastman, C. R. 1898 B, p. 551, fig. 49.
1899 B, p. 283.
Devonian (Hamilton); Wisconsin, Iowa.

STETHACANTHUS Newb. Type *S. altonensis* (St. J. and Worth.).*Newberry, J. S.* 1889 A, p. 198.*Miller, S. A.* 1892 A, p. 717.*Woodward, A. S.* 1891 A, p. 129.**Stethacanthus altonensis** (St. J. and Worth.).*St. John and Worthen* 1875 A, p. 454, pl. xix, figs. 1-3. (Physonemus.)*Lesley, J. P.* 1889 A, p. 641, figures. (Physonemus.) 1890 A, p. 1062.*Newberry, J. S.* 1889 A, p. 198, pl. xxiv, figs. 1-3. 1890 A, p. 133.*Woodward, A. S.* 1891 A, p. 129.
Subcarboniferous (St. Louis); Illinois.**Stethacanthus compressus** Newb.*Newberry, J. S.* 1897 A, p. 252, pl. xxiii, figs. 3, 4.

Subcarboniferous (Burlington); Iowa.

Stethacanthus productus Newb.*Newberry, J. S.* 1897 A, p. 291, pl. xxiii, figs. 1, 2.

Subcarboniferous (Burlington); Iowa.

Stethacanthus tumidus Newb.*Newberry, J. S.* 1889 A, pp. 198, 200, pl. xxv, figs. 1, 2.*Lesley, J. P.* 1890 A, p. 1063.*Woodward, A. S.* 1891 A, p. 129.

Devonian (Cleveland shale); Ohio, Pennsylvania?.

PHYSONEMUS McCoy. Type *P. arcuatus* McCoy.*McCoy, F.* 1848 A, p. 117.*Davis, J. W.* 1883 A, p. 368.*McCoy, F.* 1855 A, p. 638.*Miller, S. A.* 1889 A, p. 606.*Newberry, J. S.* 1889 A, p. 195.
1890 A, p. 133.*Pictet, F. J.* 1854 A, p. 291.*St. John and Worthen* 1875 A, p. 448.*Woodward, A. S.* 1891 A, p. 130.*Zittel, K. A.* 1890 A, p. 118.**Physonemus carinatus** St. J. and Worth.*St. John and Worthen* 1875 A, p. 452, pl. xviii, figs. 4, 5.*Woodward, A. S.* 1891 A, p. 131.

Subcarboniferous (Kinderhook); Iowa.

Physonemus chesterensis St. J. and Worth.*St. John and Worthen* 1875 A, p. 455, pl. xix, fig. 4.*Lesley, J. P.* 1889 A, p. 642, figure.*Woodward, A. S.* 1891 A, p. 131.

Subcarboniferous (Chester); Illinois.

Physonemus depressus St. J. and Worth.*St. John and Worthen* 1875 A, p. 452, pl. xviii, fig. 3.*Lesley, J. P.* 1889 A, p. 642, figures.*Woodward, A. S.* 1891 A, p. 131.

Subcarboniferous (Kinderhook); Iowa.

Physonemus falcatus St. J. and Worth.*St. John and Worthen* 1883 A, p. 252, pl. xxiv, fig. 6.*Keyes, C. R.* 1894 A, p. 237.*Lesley, J. P.* 1889 A, p. 643, figure.*Woodward, A. S.* 1891 A, p. 131.

Subcarboniferous (St. Louis); Missouri.

Physonemus gigas Newb. and Worth.*Newberry and Worthen* 1870 A, p. 373, pl. ii, fig. 1.*Davis, J. W.* 1883 A, p. 358.*Lesley, J. P.* 1889 A, p. 643, figures.*Newberry, J. S.* 1889 A, p. 195.*St. John and Worthen* 1875 A, p. 449.*Woodward, A. S.* 1891 A, p. 132.

Subcarboniferous (Burlington); Illinois.

Physonemus parvulus St. J. and Worth.*St. John and Worthen* 1875 A, p. 453, pl. xviii, figs. 11, 12.*Keyes, C. R.* 1894 A, p. 237.*Lesley, J. P.* 1889 A, p. 643, figures.*Woodward, A. S.* 1891 A, p. 132.

Subcarboniferous (Keokuk); Missouri, Illinois.

Physonemus proclivus St. J. and Worth.*St. John and Worthen* 1875 A, p. 451, pl. xviii, figs. 1, 2.*Lesley, J. P.* 1889 A, p. 644, figures.*Woodward, A. S.* 1891 A, p. 132.

Subcarboniferous (Kinderhook); Iowa.

Physonemus stellatus Newb.*Newberry, J. S.* 1889 A, p. 200, pl. xxi, fig. 12.*Woodward, A. S.* 1891 A, p. 132.

Subcarboniferous (St. Louis); Indiana.

XYSTRACANTHUS Leidy. Type *X. arcuatus* Leidy.*Leidy, J.* 1859 C, p. 3.*Koninck, L. G. de* 1878 A, p. 75. (Drepanacanthus.)*Jaekel, O.* 1899 A, p. 285.*Lohest, M.* 1884 A, p. 319.*Miller, S. A.* 1889 A, p. 596 (Drepanacanthus); p. 614 (Xystracanthus).*Newberry, J. S.* 1889 A, p. 195. (Drepanacanthus.)*Newberry and Worthen* 1866 A, p. 120. (Drepanacanthus; type *D. anceps*, Newb. and Worth.)*St. John and Worthen* 1875 A, p. 457.*Trautschold, H.* 1874 B, p. 297. (Drepanacanthus.)**Xystracanthus acinaciformis** St. J. and Worth.*St. John and Worthen* 1875 A, p. 459, pl. xx, fig. 2.*Lesley, J. P.* 1890 A, p. 1262, figure.*Woodward, A. S.* 1891 A, p. 131. (Physonemus.)

Coal-measures; Illinois.

Xystracanthus anceps (Newb. and Worth.).

Newberry and Worthen 1866 A, p. 122, pl. xii, fig. 8. (Drepanacanthus.)

Lesley, J. P. 1890 A, p. 1262, figure.

St. John and Worthen 1875 A, p. 458. (Xystracanthus.)

Woodward, A. S. 1891 A, p. 131. (Physonemus.)
Coal-measures; Illinois.

Xystracanthus arcuatus Leidy.

Leidy, J. 1859 C, p. 3.

1873 B, pp. 312, 353, pl. xvii, fig. 25.

St. John and Worthen 1875 A, p. 457.

Woodward, A. S. 1891 A, p. 131. (Physonemus.)
Coal Measures; Kansas.

Xystracanthus gemmatus (Newb. and Worth.).

Newberry and Worthen 1866 A, p. 123, pl. xiii, fig. 1. (Drepanacanthus.)

Batacanthus St. John and Worthen.

St. John and Worthen 1875 A, p. 468.

Miller, S. A. 1889 A, p. 588.

Woodward, A. S. 1891 A, p. 132.

Batacanthus baculiformis St. J. and Worth.

St. John and Worthen 1875 A, p. 469, pl. xxi, figs. 4-8.

Keyes, C. R. 1894 A, p. 238.

Woodward, A. S. 1891 A, p. 133.

Subcarboniferous (Keokuk); Iowa, Missouri, Illinois.

Batacanthus ? necis St. J. and Worth.

St. John and Worthen 1883 A, p. 253, pl. xxv, fig. 4.

ORACANTHUS Agassiz.

Agassiz, L. 1843 B (1837), iii, p. 13.
1844 A.

American Geologist 1888 A.

Davis, J. W. 1883 A, p. 525 (Oracanthus); p. 533 (Phoderacanthus).

Leidy, J. 1856 S, p. 161.

McCoy, F. 1855 A, p. 634.

Miller, S. A. 1889 A, p. 603 (Oracanthus); p. 607 (Pnigeacanthus).

Newberry, J. S. 1889 A, p. 34.
1890 A.

1897 A, p. 285.

Newberry and Worthen 1866 A, p. 122.

Nicholson and Lydekker 1889 A, p. 947.

Pietet, F. J. 1854 A, p. 284.

St. John and Worthen 1875 A, p. 480. (Pnigeacanthus; type *Oracanthus pnigeus*.)

Traquair, R. H. 1888 A, p. 85.

Woodward, A. S. 1891 A, p. 135.

Zittel, K. A. 1890 A, p. 162.

Oracanthus lineatus Newb.

Newberry, J. S. 1897 A, p. 290.

Subcarboniferous (St. Louis); Indiana.

Woodward, A. S. 1891 A, p. 132. (Physonemus.)
Subcarboniferous (Keokuk); Iowa.

Xystracanthus mirabilis St. J. and Worth.

St. John and Worthen 1875 A, p. 458, pl. xx, fig. 1.
Lesley, J. P. 1890 A, p. 1264, figure.

1895 A, pl. dlxxii.

Woodward, A. S. 1891 A, p. 132. (Physonemus.)
Coal-measures; Illinois.

Xystracanthus reversus (St. J. and Worth.).

St. John and Worthen 1875 A, p. 456, pl. xix, figs. 5, 6. (Drepanacanthus.)

Keyes, C. R. 1894 A, p. 237. (Drepanacanthus.)

St. John and Worthen 1883 A, p. 253, pl. xxiv, fig. 5. (Drepanacanthus.)

Woodward, A. S. 1891 A, p. 132. (Physonemus.)
Subcarboniferous (St. Louis); Illinois, Missouri.

Type B. baculiformis St. J. and Worth.

Woodward, A. S. 1891 A, p. 133.

Subcarboniferous (Keokuk); Iowa.

Batacanthus stellatus (Newb. and Worth.).

Newberry and Worthen 1866 A, p. 125, pl. xii, fig. 7. (Drepanacanthus ?)

Hambach, G. 1890 A, p. 80.

St. John and Worthen 1875 A, p. 470, pl. xxi, figs. 1-3.

Woodward, A. S. 1891 A, p. 133.

Subcarboniferous (Keokuk); Illinois, Missouri (*vide* Hambach).

Type O. milleri Agassiz.**Oracanthus multiseriatus** Newb.

Newberry, J. S. 1857 C, p. 126.

Miller, S. A. 1889 A, p. 603.

Subcarboniferous; Ohio.

Oracanthus ? obliquus St. J. and Worth.

St. John and Worthen 1875 A, p. 477, pl. xxii, fig. 16.

Lesley, J. P. 1889 A, p. 501, figures.

Woodward, A. S. 1891 A, p. 139.

Subcarboniferous (Keokuk); Illinois.

Oracanthus pnigeus Newb. and Worth.

Newberry and Worthen 1866 A, p. 117, pl. xii, fig. 3.

Lesley, J. P. 1889 A, p. 724, fig.

Miller, S. A. 1889 A, p. 607. (Pnigeacanthus.)

Newberry, J. S. 1897 A, p. 286.

St. John and Worthen 1875 A, p. 480. (Pnigeacanthus deltoides.)

1883 A, p. 260. (Pnigeacanthus pnigeus.)

Woodward, A. S. 1891 A, p. 138.

Subcarboniferous (Keokuk); Iowa.

Oracanthus rectus St. J. and Worth.

- St. John and Worthen* 1883 A, p. 257, pl. xxv, fig. 3.
Lesley, J. P. 1889 A, p. 501, figs.
Woodward, A. S. 1891 A, p. 139.
 Subcarboniferous (Chester); Illinois.

Oracanthus trigonalis (St. J. and Worth.).

- St. John and Worthen* 1883 A, p. 259, pl. xxiv, fig. 4. (Pnigeacanthus.)
Woodward, A. S. 1891 A, p. 139.
 Subcarboniferous (St. Louis); Illinois.

Oracanthus vetustus Leidy.

Leidy, J. 1855 D.

Keyes, C. R. 1894 A, p. 238.

Leidy, J. 1856 S, p. 161, pl. 16, figs. 1-3.

Lesley, J. P. 1889 A, p. 501, figs.

1895 A, pl. cccxix.

Newberry, J. S. 1890 A.

1897 A, p. 285, pl. xxii, fig. 3.

St. John and Worthen 1875 A, p. 476, pl. xxii, fig. 15. (O. consimilis.)

1875 A, p. 479.

1883 A, p. 255, pl. xxiv, fig. 2.

Woodward, A. S. 1891 A, p. 139.

Carboniferous; Missouri Territory; Subcarboniferous (St. Louis); Illinois, Missouri.

GYRACANTHUS Agassiz. Type *G. formosus* Agassiz.

Agassiz, L. 1843 B (1837), iii, p. 17.

1844 A.

Barkas, T. P. 1873 A, p. 15.

Hasse, C. 1879 A, p. 60.

Jaekel, O. 1890 D, p. 123.

McCoy, F. 1855 A, p. 629.

Miller, S. A. 1889 A, p. 598.

Newberry, J. S. 1873 A, pp. 281, 330.

1875 A, p. 57.

1889 A, p. 186.

Pictet, F. J. 1854 A, p. 284.

Reis, O. M. 1896 A.

Thompson, J. 1868 A, p. 130.

Traquair, R. H. 1884 C.

1889 B.

Ward, J. 1890 A, p. 150.

Woodward, A. S. 1885 B, p. 272.

1891 A, p. 139.

Woodward and Sherborn 1890 A, p. 88.

Gyracanthus allenii Newb.

Newberry, J. S. 1873 A, p. 331, pl. xxxvii, figs. 3-3d.

Claypole, E. W. 1885 B, p. 490.

Miller, S. A. 1889 A, p. 598, fig. 1134.

Traquair, R. H. 1884 C, p. 41.

Woodward, A. S. 1891 A, p. 144.

Subcarboniferous (Waverly); Ohio.

Gyracanthus compressus Newb.

Newberry, J. S. 1873 A, p. 330, pl. xxxvii, figs. 1-2b.

Woodward, A. S. 1891 A, p. 144.

Subcarboniferous (Waverly); Ohio, Indiana.

Gyracanthus? cordatus St. J. and Worth.

St. John and Worthen 1883 A, p. 251, pl. xxvi, fig. 4.

ERISMACANTHUS McCoy. Type *E. jonesii* McCoy.

McCoy, F. 1848 A, p. 118.

Davis, J. W. 1883 A, p. 364. (Cladacanthus.)

McCoy, F. 1855 A, p. 628.

Miller, S. A. 1889 A, p. 597.

Pictet, F. J. 1854 A, p. 292.

Woodward, A. S. 1886 E, p. 4.

1889 E, p. 130.

1891 A, p. 146.

Zittel, K. A. 1890 A, p. 118.

Woodward, A. S. 1891 A, p. 145.

Subcarboniferous (Keokuk); Iowa.

Gyracanthus duplicatus Dawson.

Dawson, J. W. 1868 A, p. 210, fig. 55.

1878 A, p. 210, fig. 55.

Lesley, J. P. 1895 A, pl. dlxx.

Newberry, J. S. 1889 A, p. 124.

Traquair, R. H. 1884 C, p. 41.

Woodward, A. S. 1891 A, p. 144.

Coal-measures; Nova Scotia.

Gyracanthus incurvus Traquair.

Traquair, R. H. 1890 A, p. 21.

Woodward, A. S. 1891 A, p. 144.

1892 A, p. 2, pl. 1, figs. 4, 5.

Devonian; Province of Quebec.

Gyracanthus inornatus Newb.

Newberry, J. S. 1889 A, p. 177, pl. xxiii, fig. 5.

Woodward, A. S. 1891 A, p. 145.

Subcarboniferous (Waverly); Ohio.

Gyracanthus magnificus Dawson.

Dawson, J. W. 1868 A, p. 210, fig. 55a.

1878 A, p. 210, fig. 55a.

Lesley, J. P. 1895 A, pl. dlxx.

Newberry, J. S. 1875 A, p. 57.

1889 A, p. 124.

Woodward, A. S. 1891 A, p. 145.

Subcarboniferous; Cape Breton.

Gyracanthus sherwoodi Newb.

Newberry, J. S. 1889 A, p. 119, pl. xviii, fig. 4.

Woodward, A. S. 1891 A, p. 145.

Devonian; Pennsylvania.

Erismacanthus maccoyanus St. J. and Worth.

St. John and Worthen 1875 A, p. 461, pl. xxii, figs. 1-5.

Keyes, C. R. 1894 A, p. 237.

Woodward, A. S. 1891 A, p. 147.

Subcarboniferous (St. Louis); Missouri, Illinois.

GAMPSACANTHUS St. J. and Worth. Type *G. typus* St. J. and Worth.

St. John and Worthen 1875 A, p. 470.

Davis, J. W. 1883 A, p. 363.

Miller, S. A. 1889 A, p. 598.

Woodward, A. S. 1891 A, p. 148.

Zittel, K. A. 1890 A, p. 118.

Gampsacanthus? latus St. J. and Worth.

St. John and Worthen 1875 A, p. 474, pl. xxii, fig. 14.

Keyes, C. R. 1894 A, p. 238.

Woodward, A. S. 1891 A, p. 148.

Subcarboniferous (Keokuk); Missouri.

Gampsacanthus squamosus St. J. and Worth.

St. John and Worthen 1875 A, p. 473, pl. xxii, fig. 13.

Keyes, C. R. 1894 A, p. 238.

Woodward, A. S. 1891 A, p. 148.

Subcarboniferous (St. Louis); Missouri.

Gampsacanthus typus St. J. and Worth.

St. John and Worthen 1875 A, p. 472, pl. xxii, fig. 12.

Keyes, C. R. 1894 A, p. 238.

Lesley, J. P. 1895 A, pl. cccxix.

Miller, S. A. 1889 A, p. 598, fig. 1132.

Woodward, A. S. 1891 A, p. 148.

Zittel, K. A. 1890 A, p. 118, fig. 129.

Subcarboniferous (St. Louis); Missouri, Illinois.

LECRACANTHUS St. J. and Worth. Type *L. unguiculus* St. J. and Worth.

St. John and Worthen 1875 A, p. 475.

Miller, S. A. 1889 A, p. 600.

Woodward, A. S. 1891 A, p. 148.

Lecracanthus unguiculus St. J. and Worth.

St. John and Worthen 1875 A, p. 476, pl. xxii, figs. 10, 11.

Keyes, C. R. 1894 A, p. 238.

Woodward, A. S. 1891 A, p. 148.

Subcarboniferous (St. Louis); Missouri, Illinois.

LISTRACANTHUS Newb. and Worth. Type *L. hystrix* Newb. and Worth.

Newberry and Worthen 1870 A, p. 371.

Koninck, L. G. de 1878 A, p. 75.

Miller, S. A. 1889 A, p. 601.

Newberry, J. S. 1873 A, p. 336.

Woodward, A. S. 1891 A, p. 148.

Listracanthus hildrethi Newb.

Newberry, J. S. 1875 A, p. 56, pl. lix, fig. 6.

Woodward, A. S. 1891 A, p. 149.

Coal-measures; Ohio.

Listracanthus hystrix Newb. and Worth.

Newberry and Worthen 1870 A, p. 372, pl. ii, figs. 3, 3a

Cope, E. D. 1894 F, p. 433.

Hambach, G. 1890 A, p. 81.

Koninck, L. G. de 1878 A, p. 75, pl. v, fig. 11.

Miller, S. A. 1889 A, p. 601, fig. 1144.

Newberry, J. S. 1873 A, p. 337.

1875 A, p. 56, pl. lix, fig. 5.

Woodward, A. S. 1891 A, p. 148.

Coal-measures; Illinois, Ohio, Missouri (*vide* Hambach). Also reported from Belgium.

CYRTACANTHUS Newb. Type *C. dentatus* Newb.

Newberry, J. S. 1873 A, p. 306.

Miller, S. A. 1889 A, p. 594.

Woodward, A. S. 1891 A, p. 150.

Cyrtacanthus dentatus Newb.

Newberry, J. S. 1873 A, p. 307, pl. xxix, fig. 5.

Miller, S. A. 1889 A, p. 594, fig. 1122.

Newberry, J. S. 1889 A, p. 28. (Cladacanthus.)

Woodward, A. S. 1891 A, p. 150.

Devonian (Corniferous); Ohio.

HARPACANTHUS Traquair. Type *Tristychius fimbriatus* Stock.

Traquair, R. H. 1886 A, p. 493.

Newberry, J. S. 1889 A, p. 203.

Stock, T. 1882 A. ("Kammlplatten.")

1882 B. (Tristychius.)

1883 A. (Tristychius.)

Traquair, R. H. 1888 A, p. 83. (Tristychius.)

Woodward, A. S. 1884 A, p. 268.

1891 A, p. 150.

Harpacanthus fimbriatus (Stock).

Stock, T. 1883 A, p. 177. (Tristychius.)

Newberry, J. S. 1889 A, p. 203, pl. xxi, fig. 11.

Traquair, R. H. 1886 A, p. 493, figs. 1, 2.

Woodward, A. S. 1891 A, p. 150, fig. 11.

Subcarboniferous (St. Louis); Illinois. Also in Scotland.

EDESTUS Leidy. Type *E. vorax* Leidy.

- Leidy, J.* 1855 D.
 Agassiz, L., in Hitchcock, E. 1856 B.
 Cope, E. D. 1870 L, p. 535.
 1872 F, p. 339.
 1875 E, p. 244c.
 1890 H.
 Dean, B. 1896 D, p. 61.
 Eastman, C. R. 1898 B, p. 554.
 Hitchcock, E. 1856 B.
 Hitchcock, Fanny R. 1887 A.
 1888 A.
 Jaekel, O. 1899 A, p. 297 (*Edestus*); p. 298 (family *Edestidæ*).
 1900 A, p. 144.
 Leidy, J. 1856 O, p. 301.
 1856 S, p. 157.
 Lesley, J. P. 1889 A, *Errata*, p. xxi.
 Miller, S. A. 1889 A, p. 597.
 Newberry, J. S. 1868 A, p. 145.
 1873 A, p. 286.
 1884 A.
 1885 A.
 1888 B.
 1889 A, p. 217.
 Newberry and Worthen 1866 A, p. 84.
 1870 A, p. 350.
 Nicholson and Lydekker 1889 A, p. 947.
 Trautschold, H. 1883 A.
 1886 A.
 1888 A, p. 750.
 1890 A.
 Woodward, A. S. 1888 A.
 1891 A, p. 151.
 Woodward, H. 1886 A.
 Zittel, K. A. 1890 A, p. 119.
- Edestus giganteus** Newb.
Newberry, J. S. 1888 B, p. 121, pl. vi, fig. 1.
 Dana, J. D. 1896 A, p. 681, fig. 1106.
 1888 A.
 Dean, B. 1897 B, p. 64, pl. v, fig. 3.
 Newberry, J. S. 1889 A, p. 225, pl. xli, fig. 1.
 Woodward, A. S. 1888 A.
 1891 A, p. 153.
 Coal-measures; Illinois.

Edestus heinrichsii Newb. and Worth.

- Newberry and Worthen* 1870 A, p. 350, pl. i, fig. 1.
 Dean, B. 1897 B, p. 64, pl. v, fig. 2.

EUCTENIUS Traquair. Type *E. unilateralis* (Barkas).

- Traquair, R. H.*, 1881, Geol. Magazine (2), viii, pp. 36, 334.
 Barkas, T. P. 1881 A. (*Ctenoptychius*).
 Fritsch, A. 1883 A (1880), i, pl. xx. ("Kammlplatten.")
 Stock, T. 1881 A. ("Kammlplatten.")
 1882 A.

- Eastman, C. R. 1898 B, p. 554.
 Kindle, E. M. 1898 A, p. 484.
 Newberry, J. S. 1879 A, p. 347.
 1888 B, pl. v, figs. 2, 2a, 2b.
 1889 A, p. 215.
 Woodward, A. S. 1891 A, p. 152.
 Woodward, H. 1886 A, p. 3.
 Coal-measures; Illinois, Indiana.

Edestus lecontei Dean.

- Dean, B.* 1897 B, p. 62, pl. iv; pl. v, fig. 6.
 Jaekel, O. 1900 A, p. 147.
 Carboniferous?; Nevada.

Edestus minor Newb.

- Newberry, J. S.*, in Newberry and Worthen 1866 A, p. 84, pl. iv, fig. 24.
 Dana, J. D. 1896 A, p. 681, fig. 1107.
 Dean, B. 1897 B, p. 64, pl. v, fig. 4.
 Hitchcock, E. 1856 B, text figure. (No name.)
 Kindle, E. M. 1898 A, p. 484.
 Lesley, J. P. 1889 A, p. 214, figure. (*E. vorax*).
 Newberry, J. S. 1879 A, p. 348.
 1888 B, pl. v, fig. 1.
 1889 A, p. 215.
 Newberry and Worthen 1870 A, p. 350, pl. i, fig. 2. (*E. vorax*, by error.)
 Trautschold, H. 1888 A, p. 753.
 Woodward, A. S. 1891 A, p. 153, fig. 12.
 Zittel, K. A. 1890 A, p. 119. (*E. vorax*).
 Coal-measures; Indiana.

Edestus vorax Leidy.

- Leidy, J.* 1855 D.
 Dean, B. 1897 B, p. 63.
 Leidy, J. 1856 O, p. 301.
 1856 S, p. 159, pl. xv.
 1870 H, p. 13.
 Lesley, J. P. 1895 A, pl. ccxxix.
 Miller, S. A. 1889 A, p. 597, fig. 1129.
 Newberry, J. S. 1868 A, p. 145.
 1879 A, p. 347.
 1888 B, pl. iv, fig. 2.
 1889 A, p. 218.
 Woodward, A. S. 1891 A, p. 154.
 Woodward, H. 1886 A, p. 3.
 Coal-measures; Arkansas.

OESTOPHORUS S. A. Miller. Type *Sphenophorus lilleyi* Newb.

- Miller, S. A.* 1892 A, p. 716.
 Newberry, J. S. 1889 A, p. 91. (*Sphenophorus*, type *S. lilleyi*; preoccupied.)

- Oestophorus lilleyi** (Newb.).
Newberry, J. S. 1889 A, p. 92. (*Sphenophorus*).
 Hay, O. P. 1899 E, p. 791.

- Lesley, J. P. 1890 A, p. 977. (Sphenophorus.)
 Miller, S. A. 1892 A, p. 716.
 Woodward, A. S. 1891 A, p. 157. (Sphenophorus.)
 Devonian (Chemung); Pennsylvania.

Oestophorus n. sp. Eastman.

- Eastman, C. R. 1899 B, p. 287. (Sphenophorus
 n. sp.; no description.)
 Devonian; Iowa.

CALLOGNATHUS Newb. Type *C. regularis* Newb.

- Newberry, J. S. 1889 A, p. 69.
 Miller, S. A. 1892 A, p. 714.

Callognathus regularis Newb.

- Newberry, J. S. 1889 A, p. 70, pl. xxvii, fig. 18.
 Woodward, A. S. 1891 A, p. 157.
 Devonian (Cleveland shale); Ohio.

Callognathus serratus Newb.

- Newberry, J. S. 1889 A, p. 70, pl. xxvii, figs. 16, 17.
 Woodward, A. S. 1891 A, p. 157.
 Devonian (Cleveland shale); Ohio.

PROSPIRAXIS Williams. Type *Spiraxis major* Newb.

- Williams, H. S. 1887 A, p. 86.
 Cope, E. D. 1895 B, p. 159. (Spiraxis.)
 Hollick, A. 1894 A, p. 118. (Spiraxis.)
 Newberry, J. S. 1885 C, p. 219. (Spiraxis, not of
 Adams, 1850.)
 Stainer, X. 1894 A. (Spiraxis.)

Prospiraxis major (Newb.).

- Newberry, J. S. 1885 C, p. 219, pl. xviii, fig. 1.
 (Spiraxis.)
 Cope, E. D. 1895 B, p. 159. (Spiraxis.)
 Lesley, J. P. 1890 A, p. 994, figures. (Spiraxis.)

- Williams, H. S. 1887 A, p. 86. (Spiraxis?.)
 Devonian (Chemung); Ohio, New York?

Prospiraxis randallii (Newb.).

- Newberry, J. S. 1885 C, p. 220, pl. xviii, figs. 2, 3.
 (Spiraxis.)
 Cope, E. D. 1895 B, p. 159. (Spiraxis.)
 Lesley, J. P. 1890 A, p. 995. (Spiraxis.)
 Williams, H. S. 1887 A, p. 86. (Spiraxis?.)
 Devonian (Chemung); Pennsylvania New
 York?.

Class PISCES Linnæus.

Linnæus, C., 1758, Syst. Nat., ed. x, p. 239.

Agassiz, L. 1843 B.

1844 A.

1845 A.

Baudelot, E. 1873 A.

1873 B.

Bridge, W. J. 1879 A.

1896 A.

Cope, E. D. 1872 C.

1877 O.

1878 A.

1885 G.

1889 R.

1890 B.

1891 N.

1898 B.

Dean, B. 1895 A.

Gadow, H. 1898 A, p. 7. (Teleostomi.)

Gegenbaur, C. 1898 A.

Gill, T. 1861 A. (Teleostei, Ganoidei.)

1872 C.

1873 B.

1873 D.

1893 A. (Teleostomes.)

1896 C. p. 912.

Grassi, B. 1883 A.

Günther, A. 1880 A.

1881 A.

Haeckel, E. 1895 A, p. 244 (Ganoidei); p. 247 (Os-
 teodermi); p. 252 (Teleostei); p. 257 (Dipneusta).

Harrison, R. G. 1894 A. (Teleostei.)

Hertwig, O. 1876 A.

1881 A.

Hubrecht, A. A. W. 1878 A.

Humphrey, J. 1866 A.

Huxley, T. 1870 A, p. 440.

1876 A.

Jordan, D. S. 1891 A.

Jordan and Evermann, 1896 A.

1898 A.

Nicholson and Lydekker 1889 A.

Owen, R. 1847 B.

1866 A.

Parker, W. K. 1874 A.

1882 A.

Pictet, F. J. 1854 A, p. 37. ("Teleostiens.")

Pollard, H. B. 1894 B. ("Fishes.")

Röse, C. 1894 B. ("Fishes.")

Ryder, J. 1879 B.

1885 A.

1889 B.

1892 A.

Stannius, H. 1854 A.

Steinmann and Döderlein 1890 A, p. 551. (Euch-
 thyes.)

Woodward, A. S. 1891 A.

1895 A.

Zittel, K. A. 1890 A.

The term *Pisces* is employed here in much
 the same sense in which it was used originally
 by Linnæus; that is, to designate the fish-like
 animals, exclusive of the sharks and rays and
 the lampreys. There are furthermore included
 certain fossil groups and the Dipnoi, not known
 to Linnæus. The authors cited above use the
 term in various senses, and some employ other
 terms to designate this group.

Subclass ASPIDOGANOIDEI Gill.

- Gill, T. 1876, Johnson's Univ. Cyclop., iv, p. 185.
 Cope, E. D. 1889 R, p. 852. (Ostracodermi, pre-occupied.)
 1891 G. (Ostracophori.)
 1891 N, p. 8. (Ostracophori.)
 1898 B, p. 15. (Ostracophori.)
 Dean, B. 1895 A. (Ostracodermi.)
 Gadow, H. 1898 A, p. 4. (Hypostomata.)
 Gill, T. 1896 C, p. 912.. (Aspidoganoidei.)
 Hay, O. P. 1899 F, p. 682.
 Jaekel, O. 1896 B, p. 127. (Ostracodermi.)
 Patten, W. 1890 A. (Ostracodermi.)
- Rohon, J. V. 1892 C, p. 86. (Protocephali.)
 1894 A, p. 52. (Protocephali.)
 1895 B, p. 16. (Protocephali.)
 1896 A. (Genus Thyestes.)
 1896 B, p. 16. (Protocephali.)
 Traquair, R. H. 1900 A, p. 158. (Ostracodermi.)
 1900 B, p. 467. (Ostracodermi.)
 Woodward, A. S. 1891 A, pp. xvi, 159. (Ostracodermi.)
 1892 F, p. 599.
 1898 B, p. 3. (Ostracodermi.)
 1900 D. (Ostracodermi.)

Order HETEROSTRACI Lankester.

- Powrie and Lankester 1868 A, pp. 5, 14.
 Cope, E. D. 1891 N, p. 9.
 1898 B, p. 15.
 Gadow, H. 1898 A, p. 4.
 Rohon, J. V. 1895 B, p. 16. (Aspidorhini.)
 1896 A. (Genus Thyestes.)
 1896 B. (Aspidorhini.)
- Traquair, R. H. 1899 A, p. 858.
 1900 B, p. 467.
 Woodward, A. S. 1891 A, pp. xix, 159.
 1898 B, p. 5.
 1900 D.
 Zittel, K. A. 1890 A, p. 144.

PTERASPIDÆ.

- Claypole, E. W. 1885 D, p. 56.
 1885 C, p. 734.
 1892 D, p. 542.
 Cope, E. D. 1887 O, p. 1015.
 Dean, B. 1895 A, figures.
 Jaekel, O. 1896 B, p. 128.
 Nicholson and Lydekker 1889 A, p. 960.
 Patton, W. 1890 A.
 Reis, O. M. 1896 A, pp. 212, 213.
 Rohon, J. V. 1892 C.
 1894 A.
- Rohon, J. V. 1896 B.
 1897 A.
 1899 B, p. 9.
 Schmidt, F. 1873 C. ("Pteraspiden.")
 Steinmann and Döderlein 1890 A, p. 553.
 Traquair, R. H. 1899 A, p. 849.
 Woodward, A. S. 1887 A.
 1891 A, p. 159.
 1892 F.
 Zittel, K. A. 1890 A, p. 144.

PTERASPIS Kner. Type *Cephalaspis lloydii* Agassiz, = *P. rostrata* Agassiz.

- Kner, R. 1847 A, p. 165.
 Agassiz, L. 1843 B, ii, p. 135. (Cephalaspis, in part.)
 Alth, A. 1874 A, p. 41.
 1886 A.
 Claypole, E. W. 1884 A. (Pteraspis, Scaphaspis.)
 1885 A.
 Collinge, W. E. 1893 A, p. 2.
 Eichwald, E. 1871 A, p. 1, pl. i. (Palæoteuthis, type *P. marginalis*.)
 Huxley, T. H. 1858 A.
 1859 A.
 1861 A.
 1861 B, p. 38.
 1872 A, p. 128.
 Jaekel, O. 1892 A, p. 90.
 Kunth, A. 1872 A.
 Lankester, E. R. 1862 A.
 1864 A.
 1864 B.
 1865 A. (Pteraspis, Scaphaspis.)
 1873 A.
 1873 B. (Scaphaspis, Pteraspis.)
 1874 A.
- Mitchell, H. 1862 A.
 1864 A.
 Nicholson and Lydekker 1889 A, p. 960.
 Owen, R. 1860 E, p. 122.
 Powrie, J. 1864 A.
 Powrie and Lankester 1868 A. (Pteraspis and Scaphaspis.)
 Roemer, F. 1856 A. (Palæoteuthis.)
 Rohon, J. V. 1892 C.
 1896 B.
 Ryder, J. A. 1890 A, p. 491.
 Salter, J. W. 1867 A.
 Schmidt, F. 1866 A, p. 217.
 1873 A.
 1873 B.
 1873 C.
 Traquair, R. H. 1899 A, p. 850.
 1900 B, p. 466.
 Woodward, A. S. 1887 A.
 1891 A, p. 160.
 1892 F, figs. 1, 9.
 Zittel, K. A. 1890 A, p. 147.
 No American species of this genus are known.

CYATHASPIS Lankester. Type *C. banksi* Huxley and Salter.

Lankester, R. 1865 A, p. 100.

Alth, A. 1874 A, p. 45.

1886 A.

Claypole, E. W. 1892 D.

Geinitz, H. B. 1884 A, p. 854.

Jaekel, O. 1892 A, p. 90.

Kunth, A. 1872 A.

Lankester, E. R. 1873 B.

Lindström, G. 1895 A.

Matthew, G. F. 1887 B, p. 73. (Diplaspis.)

1888 A, p. 49. (Diplaspis.)

Miller, S. A. 1889 A, p. 596. (Diplaspis.)

Powrie and Lankester 1868 A, p. 26.

Rohon, J. V. 1896 B, p. 18.

Schmidt, F. 1873 A.

1873 C.

Traquair, R. H. 1900 B, p. 467.

Woodward, A. S. 1891 A, p. 170.

1892 F, fig. 2.

Zittel, K. A. 1890 A, p. 148.

Cyathaspis acadica (Matthew).

Matthew, G. F. 1886 A. (Pteraspis?)

American Geologist 1891 B, p. 329. (Diplaspis.)

Matthew, G. F. 1887 A.

1887 B, p. 69. (Diplaspis.)

1888 A, p. 49, pl. iv, figs. 1-4. (Diplaspis.)

1891 A. (Diplaspis.)

Miller, S. A. 1889 A, p. 596. (Diplaspis.)

Rohon, J. V. 1896 B, p. 19.

Woodward, A. S. 1891 A, p. 173.

Upper Silurian; New Brunswick.

PALÆASPIS Claypole. Type *P. americana* Claypole.

Claypole, E. W. 1884 A, p. 1224.

1885 A, p. 426.

1885 C.

1885 D, pp. 50, 62.

1892 D.

Collinge, W. E. 1893 A, p. 3.

Lankester, E. R. 1873 A, p. 242. (Holaspis, pre-occupied.)

1873 C.

Lesley, J. P. 1892 A, p. 775.

Miller, S. A. 1889 A, p. 604.

Traquair, R. H. 1900 B, p. 467.

Woodward, A. S. 1891 A, p. 169.

1898 B, p. 435.

Zittel, K. A. 1890 A, p. 148. (Holaspis.)

Palæaspis americana Claypole.

Claypole, E. W. 1884 A, p. 1224.

1884 A, p. 1224. (P. bitruncata.)

1885 A, p. 426. (P. bitruncata.)

Claypole, E. W. 1884 A, p. 1224.

1885 D, p. 62, fig. 7 (P. americana); fig. 8 (P. bitruncata).

1892 D, p. 561, fig. 8.

1893 C.

Dean, B. 1895 A, p. 71.

Lesley, J. P. 1889 A, p. 575, figures. (P. americana, P. bitruncata.)

Matthew, G. F. 1888 A, p. 54.

Rohon, J. V. 1896 B, p. 21.

Traquair, R. H. 1899 A, p. 853.

Woodward, A. S. 1891 A, p. 170.

Zittel, K. A. 1890 A, p. 317.

Devonian (Onondaga); Pennsylvania.

Palæaspis elliptica Claypole.

Claypole, E. W. 1885 C.

1885 A, p. 426.

Upper Silurian; Pennsylvania.

Order OSTEOSTRACI Lankester.

Powrie and Lankester, 1868 A, p. 14.

Cope, E. D. 1891 N, p. 9.

1898 B, p. 15.

Gadow, H. 1898 A, p. 4.

Powrie and Lankester, 1870 A, p. 33.

Rohon, J. V. 1892 C, p. 86.

1895 B, p. 16. (Aspidocephali.)

1894 A, p. 51. (Aspidocephali.)

1894 B. (Tremataspidae.)

Rohon, J. V. 1892 C, p. 86.

1896 A. (Genus Thyestes.)

1896 B, p. 21. (Aspidocephali.)

Schmidt, F. 1894 A. (Genus Thyestes.)

Traquair, R. H. 1899 A, p. 857.

1900 B, p. 467.

Woodward, A. S. 1891 A, pp. xix, 176.

1898 B, p. 8.

CEPHALASPIDÆ.

Huxley, T. H. 1861 B, p. 38.

Agassiz, L. 1843 A, p. 86. ("Céphalaspides.")

1844 B, p. 4. ("Céphalaspides.")

1846 A, p. 37. ("Céphalaspides.")

Cope, E. D. 1886 D.

1887 O, p. 1015.

Dean, B. 1895 A.

Haeckel, E. 1895 A, p. 236. (Cephalaspides.)

Huxley, T. H. 1872 A, p. 128.

Jaekel, O. 1892 A, p. 90.

1896 B, p. 128.

Newberry, J. S. 1873 A, p. 256.

Nicholson and Lydekker, 1889 A, pp. 959, 961.

Pictet, F. J. 1854 A, p. 218. ("Céphalaspides.")

Pollard, H. B. 1895 A, p. 419.

Powrie and Lankester, 1868 A.

1870 A.

Rohon, J. V. 1892 C.

1896 B, p. 23.

Schmidt, F. 1866 A.

1873 C.

Steinmann and Döderlein, 1890 A, p. 553.

Woodward, A. S. 1890 B, p. 316.

1891 A, p. 176.

1898 B, p. 8.

Zittel, K. A. 1890 A, p. 148.

CEPHALASPIS Agassiz. Type *C. lyelli* Agassiz.*Agassiz, L.* 1843 B (1835), ii, p. 153.

1843 A.

1844 A.

1844 B. (Pterichthys.)

Alth, A. 1874 A.

1886 A.

Claypole, E. W. 1885 C.

1885 D.

1892 D, p. 556.

Cope, E. D. 1886 D.

1888 U.

Huxley, T. H. 1858 A.

1859 A.

1861 B, p. 38.

1872 A, p. 128.

Jaekel, O. 1892 A, p. 90.

Kunth, A. 1872 A.

Miller, H. 1859 A, p. 50, pls. x, xiii.

Miller, S. A. 1889 A, p. 589.

Newberry, J. S. 1856 A.

Nicholson and Lydekker, 1889 A, p. 961.

Owen, R. 1860 E, p. 122.

Pander, C. H. 1856 A.

Pictet, F. J. 1854 A, p. 219.

Powrie, J. 1861 A.

Powrie and Lankester, 1868 A.

1870 A.

Quenstedt, F. A. 1885 A, p. 353.

Rohon, J. V. 1892 C.

1896 B, p. 23.

Schmidt, F. 1866 A.

Traquair, R. H. 1857 A.

1899 A, p. 857.

1900 B, p. 467.

Woodward, A. S. 1891 A, p. 177.

1892 A, figs. 5, 10.

1898 B, p. 9.

1900 D.

Zittel, K. A. 1890 A, p. 149.

Cephalaspis campbelltonensis Whiteaves.*Whiteaves, J. F.* 1881 E, p. 98

Claypole, E. W. 1884 A, p. 1223.

Miller, S. A. 1892 A, p. 714.

Rohon, J. V. 1896 B, p. 25.

Traquair, R. H. 1890 A, p. 21. (*C. campbelltonensis*; *C. whiteavesi*.)

1893 A, p. 146.

1893 D, p. 113.

Whiteaves, J. F. 1883 A, p. 355.

1883 B, p. 164.

1889 A, p. 92, pl. x, fig. 2.

Woodward, A. S. 1891 A, p. 190, pl. ix, fig. 5.

1892 A, p. 4, pl. i, fig. 6.

Lower Devonian; New Brunswick.

Cephalaspis dawsoni Lankester.*Lankester, E. R.* 1870 A, p. 397, figs. 1, 2.

Claypole, E. W. 1884 A, p. 1223.

Rohon, J. V. 1896 B, p. 25.

Whiteaves, J. F. 1881 E, p. 99.

1883 B, p. 164.

1899 A, p. 410.

Woodward, A. S. 1891 A, p. 192, fig. 26.

Lower Devonian; Gaspé, Canada.

Cephalaspis jexi Traquair.*Traquair, R. H.* 1893 A, p. 147.

Rohon, J. V. 1896 B, p. 25.

Traquair, R. H. 1893 D, p. 114.

Upper Devonian; Scaumenac Bay, Canada.

Cephalaspis laticeps Traquair.*Traquair, R. H.* 1890 A, p. 16.

Miller, S. A. 1892 A, p. 714.

Rohon, J. V. 1896 B, p. 25.

Whiteaves, J. F. 1899 A, p. 412.

Woodward, A. S. 1891 A, p. 192.

Upper Devonian; Scaumenac Bay, Canada.

EUPHANEROPIDÆ

Woodward, A. S. 1900 B, p. 418.EUPHANEROPS Woodward. Type *E. longævus* Woodward.*Woodward, A. S.* 1900 B, p. 416.**Euphanerops longævus** Woodward.*Woodward, A. S.* 1900 B, p. 416, pl. x, figs. 1-1b.
Devonian; Quebec.

Subclass AZYGOSTEI, nom. nov.

Gill, T., 1876, Johnson's Cyclopaedia, iv, p. 185.
(Dipnoi.)

*Superorder PLACODERMI McCoy.**McCoy, F.* 1848 A, p. 6.

Cope, E. D. 1886 D, p. 1031. (Placoganoidei, Placodermi.)

1887 O, p. 1019.

1889 R, p. 856.

Dames, W. 1885 A.

Dean, B. 1891 A.

Egerton, P. G. 1848 B.

Günther, A., 1880 A, p. 351.

1881 A, p. 686.

Hay, O. P. 1899 F, p. 682.

Haeckel, E. 1895 A, pp. 236, 248.

Huxley, T. H. 1872 A, p. 129.

Jaekel, O. 1896 B, p. 128.

Koenen, A. 1883 A.

1895 A.

Lütken, C. 1873 A, p. 41.

Marsh, O. C. 1877 E.

McCoy, F. 1848 B.

1855 A, p. 598. (Placodermata.)

Newberry, J. S. 1873 A, p. 257.

1875 A, p. 3.

Nicholson and Lydekker 1889 A, 962.

Owen, R. 1860 E, p. 118.

Pander, C. H. 1857 A.

Rohon, J. V. 1892 A, p. 32.

1899 A, p. 16.

1899 B, p. 10.

Steinmann and Döderlein 1890 A, p. 551.

Zittel, K. A. 1890 A, p. 151.

Order ANTIARCHA Cope.

Cope, E. D. 1885, I p. 291.

1886 D, p. 1031.

1887 S, p. 323.

1891 N, p. 9.

1898 B, p. 15.

Gadow, H. 1898 A, p. 4.

Traquair, R. H. 1900 A, p. 159.

ASTEROLEPIDÆ.

Cope, E. D. 1885 I. (Pterichthyidæ.)

1886 D. (Pterichthyidæ, Bothriolepididæ.)

1887 O, p. 1015. (Pterichthyidæ, Bothriolepididæ.)

1887 S, p. 323. (Pterichthyidæ.)

1889 R, p. 853. (Pterichthyidæ.)

Gürich, G. 1891 A, p. 910. (Pterichthyidæ.)

Haeckel, E. 1895 A, pp. 248, 658. (Asterolepides)

Jaekel, O. 1893 A.

Nicholson and Lydekker 1889 A, p. 962. (Asterolepidae.)

Rohon, J. V. 1899 A, p. 20.

Steinmann and Döderlein 1890 A, p. 552. (Asterolepidae.)

Traquair, R. H. 1888 C, pls. xvii, xviii.

1894 C, pp. 64, 70.

1900 B, p. 467.

Woodward, A. S. 1891 A, pp. xviii, 203.

1898 B, p. 12.

ASTEROLEPIS Eichwald. Type *A. ornata* Eichwald.*Eichwald, E.* 1840 A, p. 79.

Agassiz, L. 1844 B, p. 89 (Asterolepis, in part); p. 111 (Odontacanthus).

Beyrich, E. 1877 A.

Egerton, P. H. 1859 A, p. 121.

Eichwald, E. 1846 A, pt. ii, p. 283.

1857 A, p. 345.

1860 A, p. 1504, pl. lvi, fig. 1 (Asterolepis); p. 1521 (Coccosteus).

Jaekel, O. 1896 B, p. 128.

Miller, J. 1872 A.

Newberry, J. S. 1856 A.

1873 A, p. 323.

Pander, C. H. 1857 A.

Rohon, J. V. 1891 A.

1899 A, pp. 20, 70.

Traquair, R. H. 1888 B, p. 508.

1888 C, p. 492.

1889 A.

1894 C, p. 71.

Whiteaves J. F. 1880 A, p. 132.

Woodward, A. S. 1891 A, p. 203.

1898 B, p. 15.

Zittel, K. A. 1890 A, p. 155.

There are no known American species of this genus.

ASTRASPIIS Walcott. Type *A. desiderata* Walcott.

Walcott, C. D. 1892 A, p. 166.

Astraspis desiderata Walcott.

Walcott, C. D. 1892 A, p. 166, pl. iii, figs. 6-14; pl. iv, figs. 1-4.

American Geologist 1891 E. (Asterolepis? desiderata.)

Cope, E. D. 1893 I, p. 268.

Dana, J. D. 1896 A, p. 509, fig. 695.

Silurian (Ordovician); Colorado.

PTERICHTHYODES Bleeker. Type *Pterichthys milleri* Agassiz.

Bleeker, P., 1859, Tentamen, p. 11.

The following authors, unless otherwise noted, employ the name *Pterichthys* for this genus. It is, however, preoccupied by Swainson, 1839.

Agassiz, L. 1843 A, p. 81.

1844 A.

1844 B, pp. 6, 151.

1846 A, p. 43.

Beyrich, E. 1877 A.

Collinge, W. E. 1893 A, p. 3.

Cope, E. D. 1885 I.

1886 D.

1887 S, p. 323.

1888 U, p. 914.

Dean, B. 1895 A, figures.

Egerton, P. H. 1848 A.

1859 A, pp. 121, 127.

Eichwald, E. 1846 A, p. 283.

Gaudry, A. 1883 A, p. 223.

Günther, A. 1880 A, p. 351, figs. 135, 136.

1862 A.

Gürich, G. 1891 A, p. 910.

Hay, O. P. 1899 E, p. 791. (*Pterichthyodes*.)

Huxley, T. H. 1861 B, p. 29.

1872 A, p. 129.

Jaekel, O. 1893 A.

1896 B, p. 128.

McCoy, F. 1855 A, p. 598.

Miller, H. 1859 A, p. 42, pls. i, ii.

Miller, S. A. 1889 A, p. 610.

1892 A, p. 716. (*Millerichthys*.)

Newberry, J. S. 1889 A, p. 110.

Nicholson and Lydekker 1889 A, p. 962.

Owen, R. 1860 E, p. 119.

Patton, W. H. 1890 A, p. 359.

Pictet, F. J. 1854 A, p. 221.

Quenstedt, F. A. 1885 A, p. 354.

Rohon, J. V. 1891 A.

1899 B, p. 10.

Steinmann and Döderlein 1890 A, p. 552.

Traquair, R. H. 1888 B, p. 508.

1888 C, p. 485.

1891 A, p. 125.

1894 C, pp. 63, 90.

Trautschold, H. 1880 B.

Whiteaves, J. F. 1880 A.

1883 B, p. 159.

Woodward, A. S. 1890 B.

1891 A, p. 208.

1892 B, p. 234.

1892 F, fig. 7.

1896 A, p. 139.

1898 B, p. 12.

Zittel, K. A. 1890 A, p. 153.

No American species of this genus are known.

BOTHRIOLEPIS Eichwald. Type *B. ornata* Eichwald.

Eichwald, E. 1840 A, p. 79.

Agassiz, L. 1844 B, p. 20 (*Pamphractus*); pp. 97, 151 (*Bothriolepis*): p. 134 (*Placothorax*).

Claypole, E. W. 1890 A, p. 257.

Collinge, W. E. 1893 A, p. 3.

Cope, E. D. 1886 D, p. 1031.

1887 O, p. 1015.

1889 R, p. 853.

Eichwald, E. 1846 A, p. 283.

1857 A, p. 345.

1860 A, p. 1511.

Gürich, G. 1891 A, p. 909.

Lahusen, I. 1880 A.

Leidy, J. 1856 E, p. 11. (*Stenacanthus*.)

1856 S, p. 164. (*Stenacanthus*.)

Miller, S. A. 1889 A, p. 588.

Newberry, J. S. 1889 A, p. 108.

Nicholson and Lydekker 1889 A, p. 962.

Patton, W. H. 1890 A, p. 359.

Roberts, G. E. 1864 A.

Rohon, J. V. 1899 A, p. 27.

1899 B, p. 10.

Steinmann and Döderlein 1890 A, p. 552.

Traquair, R. H. 1888 B, p. 509.

1888 C, p. 495.

1894 C, p. 63.

Trautschold, H. 1880 B.

Whiteaves, J. F. 1880 A, p. 132.

1881 B, p. 23.

1883 B, p. 159.

1899 A, p. 411.

Woodward, A. S. 1891 A, p. 223.

1892 B, p. 234.

1892 C, p. 484.

1898 B, p. 14.

Woodward and Sherborn 1890 A, p. 18.

Zittel, K. A. 1890 A, p. 157.

Bothriolepis canadensis Whiteaves.

Whiteaves, J. F. 1880 A, p. 132. (*Pterichthys*.)

Cope, E. D. 1881 L. (*Pterichthys*.)

1885 I, fig. 1.

1886 D.

1887 S, p. 323, fig. 62.

1888 U, p. 914, pl. xv, figs. 1, 2.

1891 N, p. 9, fig. 2.

1892 X.

1898 B, p. 16, fig. 2.

Dana, J. D. 1896 A, p. 617, fig. 960.

Miller, S. A. 1889 A, p. 588, fig. 1104.

Traquair, R. H. 1888 B, p. 509.

1888 C, p. 496, pl. xviii, fig. 6.

Whiteaves, J. F. 1881 B, p. 26. [*Pterichthys* (*Bothriolepis*).]

1881 C, p. 28. (*Pterichthys*.)

1883 A, p. 353. (*Pterichthys*.)

1883 B, p. 158. (*Pterichthys*.)

1887 A, p. 101, pls. vi-ix. (*Pterichthys*.)

1889 A, p. 91.

1899 A, p. 411.

Williams, H. S. 1893 A, p. 286, figure.

Woodward, A. S. 1891 A, p. 228.

1892 C, p. 484.

Devonian; Province of Quebec, Canada.

Bothriolepis minor Newb.

Newberry, J. S. 1889 A, p. 112, pl. xx, figs. 6-8.

Cope, E. D. 1892 L, p. 224.

Eastman, C. R. 1899 F, p. 324, fig. 5.

Woodward, A. S. 1891 A, p. 232.

Devonian (Chemung); Pennsylvania.

Bothriolepis nitida (Leidy).

- Leidy, J.* 1856 E, p. 11. (Stenacanthus.)
Cope, E. D. 1892 L, p. 221. (B. leidy.)
Eastman, C. R. 1899 F, p. 324. (B. leidy.)
Leidy, Jos. 1856 A, p. 421. (Stenacanthus.)
 1856 S, p. 163, pl. xvii, fig. 4 (Holoptychius americanus, in part); p. 164, pl. xvi, figs. 7-8 (Stenacanthus).

- Newberry, J. S.* 1889 A, pp. 109, 111, pl. xviii, fig. 2; pl. xx, figs. 1-5. (B. leidy.)
Whitfield and Hovey 1900 A, p. 348. (B. leidy.)
Woodward 1891 A, p. 232. (B. leidy.)
 Devonian (Catskill); Pennsylvania, New York.

Order ARTHRODIRA Cope.

- Cope, E. D.* 1891 B, p. 454.
 1891 N, p. 14.
 1898 B, p. 29.
Dean, B. 1895 A, p. 129.
Dollo, L. 1896 A.
Eastman, C. R. 1899 A, p. 643. ("Arthrodires.")

- Gadow, H.* 1898 A, p. 11.
Traquair, R. H. 1891 A, p. 126.
 1900 B, pp. 470, 522.
Woodward, A. S. 1891 A, p. 276.
 1898 B, p. 64.

COCCOSTEIDÆ.

- Dean, B.* 1897 A, p. 61.
Eastman, C. R. 1896 A.
 1898 D, p. 748.
 1899 A, p. 643.
Steinmann and Döderlein 1890 A, p. 552.
Gürich, G. 1891 A, p. 910.

- Jaekel, O.* 1896 B, p. 127. ("Coccosteiden.")
Koenen, A. 1895 A, p. 3.
Rohon, J. V. 1899 A, p. 31.
Traquair, R. H. 1890 B, p. 55.
Woodward, A. S. 1891 A, p. 277.
 1898 B, p. 65.

COCCOSTEINÆ, nom. nov.

Coccosteus Agassiz. Type *C. decipiens* Agassiz.

- Agassiz, L.* 1844 B, p. 22.
 1843 A. (Definition insufficient; no species).
Alth, A. 1874 A, p. 38.
Claypole, E. W. 1893 A.
 1893 G, p. 615.
Collinge, W. E. 1893 A, p. 4.
Cope, E. D. 1886 D, p. 1030.
Dames, W. 1885 A.
Davis, J. W. 1880 A, p. 356.
Dean, B. 1895 A, p. 130.
Eastman, C. R. 1898 D, p. 748.
Egerton, P. H. 1859 A, p. 127.
Gaudry, A. 1883 A, p. 232.
Günther, A. 1880 A, p. 354, fig. 137.
Gürich, G. 1891 A.
Huxley, T. H. 1861 B, p. 29.
 1872 A, p. 129.
Jaekel, O. 1891 A.
 1899 A, p. 276.
Koenen, A. 1883 A, p. 9.
 1890 A.
 1895 A, p. 3.
Lahusen, I. 1880 A.
McCoy, F. 1855 A, p. 601.
Miller, H. 1859 A, p. 18, pls. iii, ix.
Miller, S. A. 1889 A, p. 591.
Newberry, J. S. 1856 A.
 1875 A, pp. 1-27, 32.
Nicholson and Lydekker 1889 A, p. 964.
Owen, R. 1860 E, p. 123.
 1866 A, p. 196, fig. 127.
Pander, C. H. 1857 A.
Pictet, F. J. 1854 A, p. 220.
Pollard, H. B. 1895 A, p. 419.
Quenstedt, F. A. 1885 A, p. 355.
Rohon, J. V. 1892 A, p. 18.
 1899 A, p. 31.
Ryder, J. A. 1890 A, p. 491.

- Steinmann and Döderlein* 1890 A, p. 552.
Traquair, R. H. 1888 B, p. 511.
 1889 A.
 1890 C.
 1890 D.
 1891 A, p. 126.
 1891 B.
 1893 A, p. 149.
 1900 A, p. 159.
Trautschold, H. 1880 C, p. 145.
 1889 A.
 1889 B.
Woodward, A. S. 1891 A, p. 278.
 1898 B, p. 60.
Woodward and Sherborn 1890 A, p. 37.
Wright, A. A. 1893 A, p. 621.
Zittel, K. A. 1890 A, p. 158.

Coccosteus canadensis Woodward.

- Woodward, A. S.* 1892 C, p. 483, pl. xiii, fig. 2.
Traquair, R. H. 1893 C, p. 265.
 Devonian; Canada.

Coccosteus cuyahogæ Claypole.

- Claypole, E. W.* 1893 A.
 1893 G, p. 615, pl. xli, fig. 2.
 Devonian (Cleveland shale); Ohio.

Coccosteus macromus Cope.

- Cope, E. D.* 1892 L, p. 225.
 Devonian (Chemung); Pennsylvania.

Coccosteus occidentalis Newb.

- Newberry, J. S.* 1875 A, p. 32, pl. liv, figs. 2, 2a.
Claypole, E. W. 1893 A, p. 168.
 1893 G, p. 615.
Newberry, J. S. 1889 A, p. 52, pl. xxv, figs. 2, 2a.
Woodward, A. S. 1891 A, p. 293.
Zittel, K. 1890 A, p. 160.
 Devonian (Corniferous); Ohio.

LIOGNATHUS Newb. Type *L. spatulatus* Newb.

Newberry, J. S. 1873 A, p. 306.

Miller, S. A. 1889 A, p. 600.

1892 A, p. 716. (*Lispognathus*, type *Liognathus spatulatus*.)

Newberry, J. S. 1889 A, p. 52. (Syn. of *Coccosteus*.)

Zittel, K. A. 1890 A, p. 162.

Liognathus spatulatus Newb.

Newberry, J. S. 1873 A, p. 306, pl. xxix, fig. 4.

Claypole, E. W. 1893 A, p. 169. (*L. spathulatus*.)
1893 G, p. 615.

Miller, S. A. 1889 A, p. 600, fig. 1142.

1892 A, p. 716. (*Lispognathus*.)

Newberry, J. S. 1889 A, p. 52. (Syn. of *Coccosteus occidentalis*.)

Devonian (Corniferous); Ohio.

PHLYCTÆNASPIS Traquair. Type *Coccosteus acadicus* Whiteaves.

Traquair, R. H. 1890 E, p. 144.

Collinge, W. E. 1893 A, p. 5.

Eastman, C. R. 1898 D, p. 755.

Traquair, R. H. 1890 A, p. 20. (*Phlyctænius*, type *Coccosteus acadicus*; preoccupied by *Phlyctænum* Zittel.)

1890 B. (*Phlyctænius*.)

1894 B. (*Phlyctænaspis*.)

1900 A, p. 159.

Whiteaves, J. F. 1899 A, p. 412.

Woodward, A. S. 1891 A, p. 295.

Phlyctænaspis acadica (Whiteaves).

Whiteaves, J. F. 1881 E, p. 94, fig. 1. (*Coccosteus*.)

Claypole, E. W. 1893 A, p. 168. (*Coccosteus*.)

1893 G, p. 615. (*Coccosteus*.)

Dana, J. D. 1896 A, p. 616, fig. 964.

Traquair, R. H. 1890 A.

1890 B, p. 60, pl. iii, figs. 1, 2. (*Phlyctænius*.)

1893 A, p. 147, fig. 1.

1893 D, p. 115.

Whiteaves, J. F. 1883 A, p. 355. (*Coccosteus*.)

1883 B, p. 163. (*Coccosteus*.)

1889 A, p. 93, pl. ix. (*Coccosteus*.)

Williams, H. S. 1893 A, p. 286. (*Phlyctænius*.)

Woodward, A. S. 1891 A, p. 295.

1892 A, p. 5, pl. 1, figs. 7, 8.

1892 C, p. 481.

Devonian; New Brunswick.

ASPIDICHTHYS Newb. Type *A. clavatus* Newb.

Newberry, J. S. 1873 A, pp. 269, 322.

Koenen, A. 1883 A, p. 33.

1895 A, p. 13.

Miller, S. A. 1889 A, p. 587.

Newberry, J. S. 1870 B, p. 153. (*Aspicophorus*; preoccupied.)

1889 A, pp. 26, 59, 72.

Whiteaves, J. F. 1892 A, p. 355.

Zittel, K. A. 1890 A, p. 158.

Aspidichthys clavatus Newb.

Newberry, J. S. 1873 A, pp. 257, 269, 273, 323, pl. xxxv, figs. 1, 2.

Miller, S. A. 1889 A, p. 588, fig. 1102.

Newberry, J. S. 1889 A, p. 73, pl. xxxviii, figs. 3, 4.

Whiteaves, J. F. 1892 A, p. 358.

Williams, H. S. 1887 A, p. 43.

Devonian (Cleveland shale); Ohio; (Portage);

New York.

Aspidichthys? notabilis Whiteaves.

Whiteaves, J. F. 1892 A, p. 354, pl. xlvii, figs. 1, 1a.

1898 B, p. 411, pl. 1, figs. 1, 2.

Devonian, Manitoba.

DINICHTHYINÆ.

Eastman, C. R. 1897 D, p. 34.

Most of the following authors regard this group as of family value:

Claypole, E. W. 1892 B.

Cope, E. D. 1890 H.

Dean, B. 1895 A, p. 130.

1896 A.

Eastman, C. R. 1896 A.

1896 B.

1898 C, p. 372. (*Coccosteidæ*, in part.)

1898 D, p. 747. (*Dinichthynæ*.)

Newberry, J. S. 1885 D, p. 14. (*Dinichthyidæ*.)

Nicholson and Lydekker 1889 A, p. 965.

Woodward, A. S. 1891 A, p. 277. (*Coccosteidæ*, in part.)

DINICHTHYS Newb. Type *D. hertzeri* Newb.

Newberry, J. S. 1868 B, p. 146.

American Geologist 1891 A.

Claypole, E. W. 1888 A, p. 63.

1892 A (*Dinichthys*); p. 1 (*Gorgonichthys*, type *G. clarki*).

1892 B.

1892 C.

1893 E, p. 97. (*Gorgonichthys*.)

Claypole, E. W. 1888 A, p. 63.

1893 G, p. 606 (*Dinichthys*); p. 614 (*Gorgonichthys*).

1894 C, p. 189.

1895 E, p. 473. (*Gorgonichthys*.)

1896 B.

Cope, E. D. 1890 H.

1891 B, p. 450.

1892 X.

Dean, B. 1891 A.

1895 A.

1896 A, pls. vii, viii.

1897 A, p. 57, pls. ii, iii.

Eastman, C. R. 1896 A.

1896 B.

1896 C.

1897 D, p. 19.

1898 A.

1898 C, p. 371.

1898 D, p. 747.

1899 A, p. 643.

1900 B, p. 32.

Hay, O. P. 1899 E, 791.

Hitchcock, C. H. 1868 A, p. 184.

Huene, F. 1900 A, p. 64.

Koenen, A. 1895 A, p. 16.

Miller, S. A. 1889 A, p. 596.

1892 A, p. 717. (Ponerichthys, type *D. terrelli* Newb.)

Newberry, J. S. 1870 B, p. 153.

1873 A, pp. 257, 269, 313.

1875 A, p. 3.

1883 B.

1884 A.

1885 A.

1885 B, p. 25.

1885 D, p. 11.

1889 A, p. 135.

1892 A.

Nicholson and Lydekker 1889 A, p. 965.

Pollard, H. B. 1895 A, p. 420.

Reis, O. M. 1896 A, p. 152.

Steinmann and Döderlein 1890 A, p. 553.

Woodward, A. S. 1891 A, p. 300.

1898 B, p. 68.

Wright, A. A. 1894 A, p. 313.

1893 A, p. 620.

Zittel, K. A. 1890 A, p. 160.

Dinichthys canadensis Whiteaves.

Whiteaves, J. F. 1892 A, p. 353, pl. xlvii, fig. 12.

Claypole, E. W. 1896 B, p. 355.

1893 G, p. 606.

Miller, S. A. 1897 A, p. 793. (Ponerichthys.)

Upper Devonian; Manitoba.

Dinichthys clarki (Claypole).

Claypole, E. W. 1892 A. (Gorgonichthys.)

1893 E, p. 97. (Gorgonichthys.)

1893 G, p. 614, pl. xlii, fig. 3. (Gorgonichthys.)

1895 E, p. 473. (Gorgonichthys.)

Eastman, C. R. 1900 A, p. 35.

Devonian (Cleveland shale); Ohio.

Dinichthys curtus Newb.

Newberry, J. S. 1888 D, p. 179.

Claypole, E. W. 1893 G, p. 606.

Eastman, C. R. 1900 B, p. 33.

Miller, S. A. 1892 A, p. 717. (Ponerichthys.)

Newberry, J. S. 1889 A, p. 156, pls. xlviii, fig. 3?; pl. liii, figs. 1-3.

Woodward, A. S. 1891 A, p. 301.

Wright, A. A. 1893 A, p. 623.

Devonian (Cleveland shale); Ohio.

Dinichthys gouldii Newb.

Newberry, J. S. 1885 B, p. 26.

Claypole, E. W. 1893 G, p. 606.

1896 C.

Dean, B. 1896 A, pls. vii, viii.

1897 A, p. 60, pl. ii.

Miller, S. A. 1892 A, p. 717. (Ponerichthys.)

Newberry, J. S. 1889 A, p. 150, pl. ix, fig. 1; pl. x, figs. 1, 2.

Woodward, A. S. 1891 A, p. 301.

Devonian (Cleveland shale); Ohio.

Dinichthys gracilis Claypole.

Claypole, E. W. 1893 F, p. 279, text figures.

1893 G, p. 607, pl. xli, fig. 1.

Miller, S. A. 1897 A, p. 793. (Ponerichthys.)

Devonian (Cleveland shale); Ohio.

Dinichthys halmodeus (Clarke).

Clarke, J. M. 1894 A, p. 162, pl. i, and text figures.

(Coccosteus.)

Eastman, C. R. 1900 B, p. 34.

Devonian; New York.

Dinichthys hertzeri Newb.

Newberry, J. S. 1868 B.

Claypole, E. W. 1893 E, p. 94.

1893 F, p. 277.

1893 G, p. 606.

Dana, J. D. 1896 A, p. 617, figs. 965, 966.

Dean, B. 1891 A, p. 310, pl. i; pl. iii, figs. 3, 4.

Eastman, C. R. 1900 B, p. 34.

Hitchcock, C. H. 1868 A, p. 184, figs. 1, 2.

Lesley, J. P. 1889 A, p. 202, figure.

1892 A, p. 1333.

Miller, S. A. 1889 A, p. 596.

1892 A, p. 717. (Ponerichthys.)

Newberry, J. S. 1873 A, p. 316, pls. xxx, xxxi.

1875 A, p. 3.

1878 A, p. 189.

1885 D, p. 11. (D. stertzeri, *errore.*)

1889 A, pp. 64, 338, pl. xxxiii, fig. 2.

Woodward, A. S. 1891 A, pp. 301, 302.

Zittel, K. A. 1890 A, p. 160.

Devonian (Huron shale); Ohio.

Dinichthys intermedius Newb.

Newberry, J. S. 1889 A, p. 152, pl. x, figs. 1, 2; pl. xlvii, figs. 1, 2, 3? 4; pls. li, lii.

Claypole, E. W. 1892 C.

1893 G, p. 606.

1894 A, p. 190.

1896 C.

Dean, B. 1891 A, p. 312, pl. ii; pl. iii, figs. 1, 2.

1895 A, p. 133, figs. 133, 136, 144.

Eastman, C. R. 1897 D, p. 19, pl. i, fig. 1; pl. iii, fig. 1 (?).

1898 C, p. 371.

1898 D, pp. 747, 755, fig. 3.

1900 B, p. 33.

Miller, S. A. 1892 A, p. 717. (Ponerichthys.)

Woodward, A. S. 1891 A, p. 301.

Wright, A. A. 1893 A, p. 623.

Devonian (Cleveland shale); Ohio.

Dinichthys lincolni Clappole.*Clappole, E. W.* 1893 F, p. 277, text figure.

Miller, S. A. 1897 A, p. 793. (Ponerichthys.)

Devonian (Marcellus); Pennsylvania.

Dinichthys minor Newb. (not of Ringueberg).*Newberry, J. S.* 1878 A, p. 191.

Clappole, E. W. 1893 G, p. 606.

Dean, B. 1897 A, p. 58. (D. minor?)

Miller, S. A. 1892 A, p. 717. (Ponerichthys.)

Newberry, J. S. 1889 A, p. 149, pl. viii, figs. 1-8.

Devonian (Cleveland shale); Ohio.

Dinichthys newberryi Clarke.*Clarke, J. M.* 1885 A, p. 17, pl. i, fig. 1.

1897 A, p.

Clappole, E. W. 1893 G, p. 606.

Eastman, C. R. 1897 D, p. 30, pl. i, fig. 2; pl. iv.

Newberry, J. S. 1889 A, p. 153.

Lesley, J. P. 1889 A, p. 202, figure.

Woodward, A. S. 1891 A, p. 301.

Devonian (Hamilton); New York.

Dinichthys præmaxillaris nom. nov.Clappole, E. W. 1893 F, p. 279, pl. xii. (D. clarki, preoccupied by *Gorgonichthys clarki* 1892.)

1893 G, p. 607, pl. xli, fig. 1. (D. clarki.)

Eastman, C. R. 1900 B, p. 35. (D. clarki.)

Miller, S. A. 1897 A, p. 793. (Ponerichthys clarki.)

Devonian (Cleveland shale); Ohio.

Dinichthys ? precursor Newb.*Newberry, J. S.* 1889 A, p. 51, pl. xli.

Clappole, E. W. 1893 G, p. 606. (D. precursor.)

Eastman, C. R. 1899 F, p. 319. (Syn. of *D. tuberculatus*.)

Miller, S. A. 1892 A, p. 717. (Ponerichthys precursor.)

Woodward, A. S. 1891 A, p. 302.

Devonian (Corniferous); Ohio.

Dinichthys prentis-clarki. Clappole.*Clappole, E. W.* 1896 C, pl. vii.

Miller, S. A. 1897 A, p. 792. (D. prentis clarkel.)

Devonian (Cleveland shale); Ohio.

Dinichthys pustulosus Eastman.*Eastman, C. R.* 1897 D, p. 38, pl. iii, fig. 4 (D. pustulosus); p. 40 (D. mixeri).

1898 B, p. 556.

1898 C, p. 371.

1898 D, p. 748, figs. 1, 2.

1899 B, pp. 278, 283.

1900 B, p. 32, fig. 1.

Devonian (Hamilton); Wisconsin, Iowa, Illinois, New York.

Dinichthys ringuebergi Newb.*Newberry, J. S.* 1889 A, p. 60.

Clappole, E. W. 1893 G, p. 606.

Eastman, C. R. 1897 D, p. 49.

Lesley, J. P. 1892 A, p. 1333. (No name.)

Ringueberg, E. N. S. 1884 A. (D. minor; not of Newberry.)

Woodward, A. S. 1891 A, p. 302.

Devonian (Portage); Ohio.

Dinichthys terrelli Newb.*Newberry, J. S.* 1878 A, p. 322, pls. xxxii-xxxiv.

Clappole, E. W. 1893 G, pp. 606, 607, pl. xliii, figs. 1-5.

1893 E, p. 95.

1894 C, p. 189, figs. 1-5.

Cope, E. D. 1891 B, p. 450.

Dean, B. 1891 A, p. 310.

1895 A, p. 137.

1896 A, pl. viii, fig. 3.

1897 A, p. 59, pl. iii.

Eastman, C. R. 1896 B.

1897 D, pl. ii, figs. 1, 5, 6; pl. iii, fig. 2.

1898 D, pp. 747, 758.

Miller, S. A. 1892 A, p. 717. (Ponerichthys.)

Newberry, J. S. 1873 A, p. 316, pls. xxxii-xxxiv.

(D. hertzeri, in part.)

1874 C, p. 149.

1875 A, p. 27, charts v, vi.

1885 D, p. 11.

1888 D, p. 179.

1889 A, *passim*, pl. iv, figs. 1, 2.

1892 A.

Woodward, A. S. 1890 A, p. 391.

1891 A, p. 302.

1891 D.

Wright, A. A. 1893 A, p. 621, pl. xli; text fig. 1.

1894 A, pl. ix.

Devonian (Cleveland shale); Ohio.

Dinichthys tuberculatus Newb.*Newberry, J. S.* 1888 D, p. 179.

Clappole, E. W. 1893 F, p. 277.

1893 G, p. 606.

Cope, E. D. 1892 X, p. 1025. (D. pustulosus.)

Eastman, C. R. 1896 A.

1897 D, p. 38.

1899 B, pp. 278, 283.

1899 F, p. 318.

Lohest, M. 1890 A, p. lvii. (D. pustulosus; *vide* Eastman.)

Miller, S. A. 1892 A, p. 717. (Ponerichthys.)

Newberry, J. S. 1889 A, p. 98, pl. xxxii.

Woodward, A. S. 1891 A, p. 302.

Devonian (Chemung); Pennsylvania: (Corpiferous); Ohio: (Hamilton); Wisconsin: (Upper Devonian); Iowa.

Dinichthys sp. indet.

Eastman, C. R. 1899 F, p. 320, fig. 1.

Devonian (Chemung); New York.

Dinichthys sp. indet.

Eastman, C. R. 1899 F, p. 326, fig. 6.

Devonian (Catskill); New York.

STENOGNATHUS Newb. Type *Dinichthys corrugatus* Newb.

Newberry, J. S. 1897 A, p. 303.

Stenognathus corrugatus Newb.

Newberry, J. S. 1889 A, p. 151, pl. vii, figs. 3, 3a. (Dinichthys.)

1885 B, p. 26. (No description.)

1897 A, p. 303, pl. xxiv, figs. 27, 28. (Stenognathus.)

Woodward, A. S. 1891 A, p. 301. (Dinichthys).
Devonian (Cleveland shale); Ohio.

TITANICHTHYS Newb. Type *T. agassizii* Newb.

Newberry, J. S. 1885 B, p. 27.

American Geologist 1891 A.

Claypole, E. W. 1892 A.

1892 B.

1893 E, p. 95.

1893 G, pp. 608, 611.

Cope, E. D. 1891 B, p. 450.

Eastman, C. R. 1896 B.

1898 D.

1899 A, p. 643.

Miller, S. A. 1892 A, p. 717.

Newberry, J. S. 1885 D, p. 13.

Woodward, A. S. 1891 A, p. 302.

Titanichthys attenuatus Wright.

Wright, A. A., in Claypole, E. W. 1893 G, p. 612, pl. xlii, figs. 1, 2.

Devonian (Cleveland shale); Ohio.

Titanichthys brevis Claypole.

Claypole, E. W. 1896 A, pl. x.

Devonian (Cleveland shale); Ohio.

Titanichthys clarkii Newb.

Newberry, J. S. 1887 C, p. 164.

Claypole, E. W. 1888 A, p. 62.

1893 G, p. 608, pl. xlii, fig. 3.

Cope, E. D. 1888 P.

Dana, J. D. 1888 A, p. 498.

Dean, B. 1895 A, p. 136, fig. 139.

Eastman, C. R. 1898 C, p. 372.

1898 D, p. 765, fig. 5; fig. 6?

Newberry, J. S. 1889 A, p. 133, pl. ii, figs. 3, 4; pl. iii.

Woodward, A. S. 1891 A, p. 302.

Devonian (Cleveland shale); Ohio.

Titanichthys rectus Claypole.

Claypole, E. W. 1893 G, p. 609, pl. xlii, fig. 5

Devonian (Cleveland shale?); Ohio.

Titanichthys sp. indet.

Claypole, E. W. 1893 G, p. 609, pls. xxxviii, xxxix.

Titanichthys agassizii Newb.

Newberry, J. S. 1885 B, p. 27.

Claypole, E. W. 1893 G, p. 608, pl. xlii, fig. 5.

Cope, E. D. 1891 B, p. 450.

Dana, J. D. 1888 A, p. 498.

Eastman, C. R. 1898 C, p. 372.

1898 D, p. 761, fig. 4.

1899 D, p. 15.

Newberry, J. S. 1889 A, p. 153, pl. i; pl. ii, figs.

1, 2; pl. iv, fig. 4.

Woodward, A. S. 1891 A, p. 302.

Devonian (Cleveland shale); Ohio.

TRACHOSTEUS Newb. Type *T. clarkii* Newb.

Newberry, J. S. 1889 A, p. 166.

Dean, B. 1893 B.

1895 A, p. 136.

1897 A, p. 59.

Miller, S. A. 1892 A, p. 717.

Woodward, A. S. 1891 A, p. 311.

Trachosteus clarkii Newb.

Newberry, J. S. 1889 A, p. 167, pl. xlii, figs. 1-8.

Claypole, E. W. 1888 A, p. 63.

Dean, B. 1895 A, p. 137, fig. 140.

Woodward, A. S. 1891 A, p. 311.

Devonian (Cleveland shale); Ohio.

DIPLOGNATHUS Newb. Type *D. mirabilis* Newb.

Newberry, J. S. 1878 A, p. 188.

Dean, B. 1895 A, p. 137.

1897 A, p. 60.

Newberry, J. S. 1885 A.

1885 B, p. 27.

1889 A, p. 159.

Zittel, K. A. 1890 A, p. 162.

Diplognathus mirabilis Newb.

Newberry, J. S. 1878 A, p. 188.

Dean, B. 1895 A, p. 137, figs. 141-143.

Newberry, J. S. 1884 A.

1885 A.

1885 B, p. 27.

1889 A, p. 159, pl. xi, figs. 1-4; pl. xii, figs. 1-3.

Woodward, A. S. 1891 A, p. 312.

Devonian (Cleveland shale); Ohio.

BRONTICHTHYS Claypole. Type *B. clarki* Claypole.

Claypole, E. W. 1894 B.

1895 E.

Miller, S. A. 1897 A, p. 792.

Brontichthys clarki Claypole.

Claypole, E. W. 1894 B, pl. xii.

Devonian (Cleveland shale); Ohio.

MACROPETALICHTHYIDÆ.

Eastman, C. R. 1898 C, p. 372.
1898 D, p. 748.

MACROPETALICHTHYS Norw. and Owen. Type *M. rhapsoidolabis* Norw. and Owen.

Norwood and Owen 1846 A.

Claypole, E. W. 1896 B, p. 354.

Cope, E. D. 1890 H.

1891 B, p. 449.

1891 C.

Dean, B. 1895 A, p. 135.

Eastman, C. R. 1897 C.

1898 C, p. 372.

1898 D, p. 748.

1900 B, p. 36.

1900 C, p. 392 (*Macropetalichthys*); p. 391 (*Physichthys*).

1900 D, p. 177. (*Physichthys*.)

Koenen, A. 1895 A, p. 22.

Meyer, H. v., 1855, *Palæontographica*, iv, p. 80.
(*Physichthys*.)

Miller, S. A. 1889 A, p. 601.

Newberry, J. S. 1846 A, p. 291.

1857 A, p. 147. (*Agassizichthys*.)

1857 C, p. 122. (*Agassizichthys*.)

1862 A, p. 75, fig. 1.

1870 B, p. 152.

1873 A, p. 290 *et passim*.

1889 A, p. 41.

Nicholson and Lydekker 1889 A, p. 975.

Norwood and Owen 1846 B.

Woodward, A. S. 1891 A, p. 303.

1892 B, p. 233.

Zittel, K. A. 1890 A, p. 164.

Macropetalichthys rhapsoidolabis
Norwood and Owen.

Norwood and Owen 1846 A, figs. 1, 2.

Kindle, E. M. 1898 A, p. 484.

Miller, S. A. 1889 A, p. 601.

Norwood and Owen 1846 B.

Newberry, J. S. 1853 A, p. 12, fig. 1.

Woodward, A. S. 1891 A, p. 304. (Syn. of *M. sullivanti*.)

Devonian (Corniferous); Indiana.

Owen in the original description mentions the alternative name, *Pterichthys norwoodensis*.

Macropetalichthys sullivanti Newb.

Newberry, J. S. 1857 C, p. 122, fig. 1 (*Agassizichthys manni*); p. 123 (*A. sullivanti*).

Cope, E. D. 1891 B, pp. 449, 456, pl. xxx, fig. 5.

Eastman, C. R. 1897 C, pl. xii and text fig. 1.

Lesley, J. P. 1892 A, pl. cl.

Miller, S. A. 1889 A, p. 601, fig. 1146.

Newberry, J. S. 1857 A, p. 147. (*Agassizichthys sullivanti, A. manni*.)

1862 A, p. 75. (*A. sullivanti, A. manni*.)

1873 A, p. 294 *et passim*, pl. xxv, fig. 1.

1889 A, p. 28 (*M. manni*); p. 306, pl. xxxviii, figs. 1-2a (*M. sullivanti*).

Whiteaves, J. W. 1880 A, p. 133.

1889 B, p. 119.

Woodward, A. S. 1891 A, p. 304.

Devonian (Corniferous); Ohio.

GLYPTASPIS Newb. Type *G. verrucosa* Newb.

Newberry, J. S. 1889 A, p. 157.

Dean, B. 1897 A, p. 59.

Miller, S. A. 1892 A, p. 715.

Newberry, J. S. 1897 A, p. 304.

Glyptaspis verrucosa Newb.

Newberry, J. S. 1889 A, p. 158, pl. xiii, figs. 1, 2.

Woodward, A. S. 1891 A, p. 311.

Devonian (Cleveland shale); Ohio.

ASTEROSTEIDÆ.

Woodward, A. S. 1891 A, p. 312.

ASTEROSTEUS Newb. Type *A. stenocephalus* Newb.

Newberry, J. S. 1875 A, p. 35.

Eastman, C. R. 1900 B, p. 36.

Miller, S. A. 1889 A, p. 588.

Newberry, J. S. 1889 A, p. 44.

Woodward, A. S. 1891 A, p. 312.

Zittel, K. A. 1890 A, p. 164.

Asterosteus stenocephalus Newb.

Newberry, J. S. 1875 A, p. 36, pl. liv, fig. 1.

Claypole, E. W. 1896 B, p. 354.

Newberry, J. S. 1889 A, p. 45, pl. xxx, fig. 1.

Whitfield and Hovey 1900 A, p. 348.

Woodward, A. S. 1891 A, p. 313.

Devonian (Corniferous); Ohio.

PHYLLOLEPIDÆ.

Woodward, A. S. 1891 A, p. 313.

PHYLLOLEPIS Agassiz. Type *P. concentrica* Agassiz.

Agassiz, L. 1844 B, p. 67.

Fritsch, A. 1889 B (1888), p. 89.

Giebel, C. G. 1848 A, p. 227.

Newberry, J. S. 1889 A, p. 97.

Pictet, F. J. 1854 A, p. 144.

Woodward, A. S. 1891 A, p. 313.

Zittel, K. A. 1890 A, p. 180.

Phyllolepis delicatula Newb.

Newberry, J. S. 1889 A, p. 97, pl. xix, fig. 11.

Woodward, A. S. 1891 A, p. 314.

Devonian (Chemung); Pennsylvania.

HOLONEMA Newb. Type *H. rugosum* Claypole.

- Newberry, J. S. 1889 A, p. 92.
 Claypole, E. W. 1890 A.
 Cope, E. D. 1891 B, p. 456.
 1892 L, p. 221, pl. vii, fig. 3.
 Dana, J. D. 1896 A, p. 616, fig. 693.
 Dean, B. 1897 A, p. 59.
 Miller, S. A. 1892 A, p. 715.
 Williams, H. S. 1891 A.
 1893 A, p. 285.
 Woodward, A. S. 1891 A, p. 314.
 1892 B, p. 234.

Holonema horridum Cope.

- Cope, E. D. 1892 L, p. 222, pl. vii, fig. 1.
 Devonian (Chemung); Pennsylvania.

Holonema rugosum (Claypole).

- Claypole, E. W. 1883 A, fig. 1. (Pterichthys.)
 1890 A, p. 255. (Pterichthys.)
 Cope, E. D. 1891 B, p. 456.
 Lesley, J. P., 1889 A, p. 808, figure.
 Newberry, J. S. 1889 A, p. 93, pl. xvii, figs. 1-4.
 Williams, H. S. 1891 A.
 1893 A, p. 285, with figures.
 Woodward, A. S. 1891 A, p. 315.
 Devonian (Chemung); Pennsylvania, New York.

MYLOSTOMATIDÆ.

- Woodward, A. S. 1891 A, p. 315.

MYLOSTOMA Newb. Type *M. variabile* Newb.

- Newberry, J. S. 1883 A, p. 145.
 Dean B. 1893 B.
 1895 A, p. 136.
 1897 A, p. 60.
 Miller, S. A. 1892 A, p. 716.
 Newberry, J. S. 1884 A.
 1885 A, p. 724.
 1889 A, p. 161.
 Woodward, A. S. 1891 A, p. 315.
 Zittel, K. A. 1890 A, p. 128.

Mylostoma terrelli Newb.

- Newberry, J. S. 1883 A, p. 147.
 1889 A, p. 164, pl. xiv, figs. 1, 2.

- Woodward, A. S. 1891 A, p. 316.
 Devonian (Cleveland shale); Ohio.

Mylostoma variabile Newb.

- Newberry, J. S. 1883 A, p. 146.
 Dean, B. 1895 A, p. 137, fig. 138.
 Newberry, J. S. 1889 A, p. 165, pls. xv, xvi.
 Woodward, A. S. 1891 A, p. 316.
 Devonian (Cleveland shale); Ohio.

Superorder *DIPNOI* Müller.

- Müller, J. 1846 C, p. 201.
 Ayres, H. 1893 A.
 Balfour, F. M. 1882 A, p. 432.
 Baur, G. 1896 C, p. 670.
 Beard, J. 1890 A.
 Beyrich, E. 1850 A, p. 153.
 Bridge, T. W. 1898 A, p. 325.
 Chamberlin, T. C. 1900 A, p. 411. ("Dipnoans.")
 Cope, E. D. 1872 C.
 1877 O, p. 41.
 1878 A, p. 292.
 1884 N, p. 579.
 1884 H H.
 1885 G.
 1887 S, pp. 184, 324.
 1889 R, pp. 853, 854.
 1890 B.
 1891 N, pp. 10, 14.
 1898 B, pp. 17, 21.
 Dean, B. 1895 A, p. 116.
 Dollo, L. 1896 A. ("Dipneustes.")
 Eastman, C. R. 1898 A, p. 110.
 Fritsch, A. 1889 B, p. 65.
 Gadow, H., 1898 A, p. 11.
 Gadow and Abbott 1895 A.

- Gegenbaur, C. 1865 B, pp. 72, 146.
 1895 A.
 1895 B.
 1898 A.
 Gill, T. 1861 A, p. 22.
 1873 B.
 1893 A, p. 130.
 1896 C, p. 912.
 Goeppert, E. 1895 A.
 Günther A. 1870 A, p. 321.
 1871 A.
 1872 A.
 1880 A, p. 355.
 1881 A, p. 686.
 Haeckel, E. 1895 A, p. 257. (Dipneusta.)
 Hasse, C. 1893 A.
 Hay, O. P. 1899 F, p. 682.
 Huxley, T. H. 1872 A, p. 145.
 Kehner, F. A. 1876 A, p. 351.
 Klaatsch, H. 1890 A, p. 209.
 1893 A.
 1896 A, p. 316.
 Miall, L. C. 1878 A.
 Mollier, S. 1893 A, p. 86.
 Müller, J. 1846 C, p. 201.

Newberry, J. S. 1873 A, pp. 249, 252.
 Nicholson and Lydekker 1889 A, p. 952.
 Orr, H. 1885 A.
 Owen, R. 1839 C. (On *Lepidosiren annectens*.)
 Parker, W. K. 1879 B, p. 31.
 Röse, C. 1892 B.
 1895 A, p. 566.
 Rohon, J. V. 1898 A.
 Ryder, J. A. 1896 A.
 Schneider A. 1886 A.
 Semon, R. 1899 A, p. 75.
 Stannius, H. 1854 A.

Steinmann and Döderlein 1890 A, p. 553.
 Stephan, P. 1900 A. ("Dipnoiëques.")
 Teller, F. 1891 A.
 Thacher, J. K. 1877 A.
 Traquair, R. H. 1900 B, p. 521.
 Wiedersheim R. 1889 A, p. 430.
 Woodward, A. S. 1888 E.
 1891 A, pp. 20, 234.
 1898 B, p. 60.
 Zittel, K. A. 1886 A. (On *Ceratodus*.)
 1890 A, p. 122.

Order CTENODIPTERINI Pander.

Pander, C. H. 1858 A.
Agassiz, L. 1846 A, p. 44. ("Diptériens.")
Eichwald, E. 1860 A, p. 1534. ("Ctenodiptériens.")

Haeckel, E. 1895 A, p. 263. (Ctenodipneusta.)
Huxley, T. H. 1861 B, p. 13. (Ctenodipterini.)
Zittel, K. A. 1890 A, p. 125. (Ctenodipterini.)

DIPTERIDÆ.

Owen, R. 1860 E, p. 129.
Günther, A. 1872 A, p. 554. (Ctenodipteridæ.)
 1880 A, p. 359. (Ctenodipteridæ.)
Quenstedt, F. A. 1852 A, p. 228. (Dipterini.)
 1885 A, p. 349. (Dipterini.)

Steinmann and Döderlein 1890 A, p. 555.
Woodward A. S. 1891 A, p. 235.
 1898 B, p. 62. (Ctenodontidæ, part.)

DIPTERUS Sedgw. and Murch. Type *D. valenciennesi* Sedgw. and Murch.

Sedgwick and Murchison, 1828, Trans. Geol. Soc.
 Lond. (2), iii, p. 143.
Agassiz, L. 1843 A.
 1843 B, ii, pt. i, p. 3 (1833) (Catopterus, type
C. analis); p. 112 (1835) (Dipterus).
 1844 A.
 1844 B, pp. 5, 29. (Polyphractus.)
Atthey, T. 1863 A.
Bridge, T. W. 1898 A, p. 367.
Cope, E. D. 1878 A, p. 293.
Dean, B. 1895 A, p. 121, with figures.
Dollo, L. 1896 A.
Eastman, C. R. 1900 B, p. 37.
Egerton, P. H. 1859 A, p. 125.
Eichwald, E. 1860 A, p. 1535.
Emery, C. 1897 B, p. 147.
Günther, A. 1871 A, p. 428.
 1872 A, p. 556.
Hancock and Atthey 1868 A, p. 370.
 1868 B, p. 54.
 1871 A.
Huxley, T. H. 1861 B, p. 13, figs. 9, 10.
McCoy, F. 1855 A, p. 590.
Miall, L. C. 1878 B.
Miller, H. 1859 A, pl. v.
Miller, S. A. 1889 A, p. 596.
Newberry, J. S. 1875 A, p. 8.
 1889 A, p. 87.
Pander, C. H. 1858 A, p. 6, pls. i-v.
Pictet, F. J. 1854 A, p. 192.
Rohon, J. V. 1898 A.
Steinmann and Döderlein 1890 A, p. 555.
Traquair, R. H. 1878 A, p. 1.
 1888 B, p. 507.
Woodward, A. S. 1891 A, p. 235.
 1893 C.
 1898 B, p. 63.

Woodward and Sherborn 1890 A, p. 69.
Zittel, K. A. 1890 A, p. 125, fig. 135.

Dipterus calvini Eastman.

Eastman, C. R. 1900 B, p. 38, fig. 7.
Udden, J. A. 1899 A, p. 494.
 Devonian (Cedar Valley limestone); Iowa.

Dipterus contraversus Hay.

Hay, O. P. 1899 E, p. 786.
Eastman, C. R. 1900 B, p. 37.
Newberry, J. S. 1889 A, p. 119, pl. xxvii, fig. 33.
 [D. (Ctenodus) radiatus; preoccupied.]
Woodward, A. S. 1891 A, p. 242. [Dipterus
 (Ctenodus) radiatus.]
 Devonian (Catskill); Pennsylvania.

Dipterus costatus Eastman.

Eastman, C. R. 1900 B, p. 39, fig. 4.
 Devonian (Upper); Iowa.

Dipterus flabelliformis Newb.

Newberry, J. S. 1889 A, p. 90, pl. xvi, fig. 21. [D.
 (Ctenodus).]
Eastman, C. R. 1900 B, p. 37.
Newberry, J. S. 1897 A, p. 302. (Ctenodus.)
Woodward, A. S. 1891 A, p. 242.
 Devonian (Chemung); Pennsylvania.

Dipterus fleisheri (Newb.).

Newberry, J. S. 1897 A, p. 302, pl. xxiv, fig. 25.
 (Ctenodus.)
Eastman, C. R. 1900 B, p. 37.
 Devonian ("Catskill"); Pennsylvania.

Dipterus ithacensis Williams.

Williams, H. S. 1882 A.
Woodward, A. S. 1891 A, p. 243.
 Devonian (Chemung); New York.

Dipterus minutus Newb.

Newberry, J. S. 1889 A, p. 91, pl. xxvii, fig. 26. [D. (Ctenodus).]

Eastman, C. R. 1900 B, p. 37.

Woodward, A. S. 1891 A, p. 242.

Devonian (Chemung); Pennsylvania.

Dipterus mordax Eastman.

Eastman, C. R. 1900 B, p. 39, figs. 6, 8.

Devonian (Upper); Iowa.

Dipterus nelsoni Newb.

Newberry, J. S. 1889 A, p. 89, pl. xxvii, figs. 19, 20.

[D. (Ctenodus) nelsoni.]

Dana, J. D. 1896 A, p. 617, fig. 968. (Ctenodus.)

Eastman, C. R. 1899 F, p. 322.

1900 B, p. 37.

Newberry, J. S. 1889 A, p. 90, pl. xxvii, figs. 22, 23.

[D. (Ctenodus) levis.]

Williams, H. S. 1887 A, p. 62, pl. iii, fig. 1 (D. nelsoni); pp. 63, 91, pl. iii, fig. 2 (D.? levis, or D. alleganensis).

Woodward, A. S. 1891 A, p. 242. (D. nelsoni, D. levis.)

Devonian (Chemung); Pennsylvania, New York.

Dipterus sherwoodi Newb.

Newberry, J. S. 1875 A, p. 61, pl. lviii, figs. 17-17b.

Dana, J. D. 1896 A, p. 617, fig. 967.

Eastman, C. R. 1900 B, p. 37.

Lesley, J. P. 1892 A, p. 1458.

Miller, S. A. 1889 A, p. 596, fig. 1128.

Newberry, J. S. 1889 A, p. 118, pl. xxvii, figs. 3, 3b.

[D. (Ctenodus).]

Woodward, A. S. 1891 A, p. 242.

Devonian (Catskill); Pennsylvania.

Dipterus uddeni Eastman.

Eastman, C. R. 1900 B, p. 37, figs. 5, 5¹,

Devonian (Cedar Valley limestone); Iowa.

PALEDAPHUS Van Beneden and de Koninck. Type *P. insignis* Van Beneden and de Koninck.

Van Beneden and de Koninck, 1864 A, p. 143, pls. i, ii.

Fritsch, A. 1889 B (1888), p. 88.

Miller, S. A. 1889 A, p. 599. (Heliodus.)

Newberry, J. S. 1875 A, p. 62. (Heliodus.)

1889 A, p. 85. (Heliodus.)

Nicholson and Lydekker, 1889 A, p. 957.

Traquair, R. H. 1878 A, p. 12.

Woodward, A. S. 1891 A, p. 243.

Zittel, K. A. 1890 A, p. 128.

Palædaphus lesleyi (Newb.).

Newberry, J. S. 1875 A, p. 64, pl. lviii, fig. 18. (Heliodus.)

Lesley, J. P. 1892 A, p. 1461. (Heliodus.)

Miller, S. A. 1889 A, p. 599, fig. 1136. (Heliodus.)

Newberry, J. S. 1889 A, p. 86, pl. xviii, fig. 3. (Heliodus.)

Woodward, A. S. 1891 A, p. 244.

Devonian (Chemung); Pennsylvania.

CONCHODUS McCoy. Type *C. ostreaformis* McCoy.

McCoy, F. 1848 A, p. 312.

1855 A, p. 593.

Miller, S. A. 1889 A, p. 592.

Pictet, F. J. 1854 A, p. 269.

Rohon, J. V. 1898 A.

Woodward, A. S. 1891 A, p. 245.

Conchodus plicatus Dawson.

Dawson, J. W. 1868 A, p. 209, fig. 53.

1878 A, p. 209, fig. 53.

Miller, S. A. 1889 A, p. 592, fig. 1115.

Woodward, A. S. 1891 A, p. 255.

Coal-measures; Nova Scotia.

GANORHYNCHUS Traquair. Type *G. woodwardi* Traquair.

Traquair, R. H. 1873 A.

Miller, S. A. 1892 A, p. 715.

Woodward, A. S. 1891 A, p. 245.

Ganorhynchus beecheri Newb.

Newberry, J. S. 1889 A, p. 95, pl. xix, fig. 2.

Woodward, A. S. 1891 A, p. 246.

Devonian (Chemung); Pennsylvania.

Ganorhynchus oblongus Cope.

Cope, E. D. 1892 L, p. 225.

Devonian (Catskill): Pennsylvania.

PHANEROPLEURIDÆ.

Collenge, W. E. 1893 A, p. 3. (Phaneropleuron.)

Cope, E. D. 1878 A, p. 293. (Phaneropleuron.)

1887 O, p. 1018. (Haplistia.)

1889 R, p. 856. (Haplistia.)

1891 B, p. 460. (Haplistia.)

Günther, A. 1872 A, p. 555.

1880 A, p. 360.

1881 A, p. 687.

Haeckel, E. 1895 A, p. 262.

Huxley, T. H. 1861 B, p. 24. (Phaneropleurini.)

1861 C, (Phaneropleuron.)

Jaekel, O. 1890 B, p. 1.

Klaatsch, H. 1896 A, p. 316.

Steinmann and Döderlein, 1890 A, p. 554.

Traquair, R. H. 1871 A.

1875 C, p. 394.

1893 D, p. 121.

Woodward, A. S. 1891 A, p. 247. (Phaneropleuron.)

SCAUMENACIA Traquair. Type *S. curta* (Whiteaves).

Traquair, R. H. 1893 C, p. 262.

Dollo, L. 1896 A.

Fritsch, A. 1889 B, p. 66 (1888). (Phaneropleuron.)

Traquair, R. H. 1890 F, p. 393. (Phaneropleuron.)
1893 D, p. 118.

Woodward, A. S. 1898 B, p. 71.

Scaumenacia curta (Whiteaves).

Whiteaves, J. F. 1881 C, p. 29. (Phaneropleuron.)

Bridge, T. W. 1898 A, p. 368.

Dana, J. D. 1896 A, p. 617, fig. 969. (Phaneropleuron.)

Jaekel, O. 1890 B, p. 2.

Traquair, R. H. 1890 A, p. 15.

1890 F, p. 393. (Phaneropleuron.)

Traquair, R. H. 1893 C, p. 262.

1900 B, p. 520

Whiteaves, J. F. 1881 C, p. 354. (Phaneropleuron.)

1883 B, p. 160. (Phaneropleuron.)

1881 C, p. 29. (Phaneropleuron.)

1887 A, p. 108, pl. x, figs. 2-2e. (Phaneropleuron.)

1889 A, p. 91, pl. v, fig. 3. (Phaneropleuron.)

1891 A, p. 495. (Phaneropleuron.)

Woodward, A. S. 1891 A, p. 248. (Phaneropleuron.)

1893 C.

1898 B, p. 22, fig. 20; p. 71. (Phaneropleuron.)

Devonian (Upper); Canada.

Order SIRENOIDEI Müller.

Müller, J. 1843 A, p. 217.

Bischoff, T. L. W. 1840 A, pls. i-viii. (Lepidosiren.)

Bridge, T. W. 1898 A.

Cope, E. D. 1889 R, p. 854.

1898 B, p. 29.

Gadow, H. 1898 A, p. 11.

Gill, T. 1893 A, p. 130.

Günther, A. 1870 A, p. 321.

1872 A, p. 554. (Sirenidae.)

Günther, A. 1881 A, p. 686. (Sirenidae.)

Kölliker, A. 1859 A.

Miall, L. C. 1878 A, p. 12.

Müller, J. 1846 C, p. 201.

Owen, R. 1866 A.

Wiedersheim, R. 1880 B. (Lepidosiren.)

Woodward, A. S. 1891 A, p. 235, part.

1898 B, p. 61, part.

Zittel, K. A. 1890 A, p. 130.

CTENODONTIDÆ.

Cope, E. D. 1889 R, p. 854. (Lepidosirenidae, part.)

Traquair, R. H. 1888 A, p. 61.

1893 D, p. 121.

Woodward, A. S. 1891 A, p. 250.

1898 B, p. 62.

CTENODUS Agassiz. Type *C. cristatus* Agassiz.

Agassiz, L. 1843 B (1838), p. 137.

1844 A.

1844 B, p. 122.

Atthey, T. 1868 A.

1875 A.

Barkas, W. J. 1873 A, pp. 27, 113.

1877 A, pls. i-v.

1878 A.

Bridge, T. W. 1898 A, p. 367.

Collinge, W. E. 1893 A, p. 4.

Cope, E. D. 1878 A, p. 293.

1881 K, p. 162.

Dollo, L. 1896 A.

Fritsch, A. 1889 B (1888), pp. 66, 93.

Günther, A. 1871 A, p. 423.

Hancock and Atthey 1868 A, p. 357.

1868 B, p. 54.

1871 A.

1872 A, p. 257.

Jaekel, O. 1890 B, p. 6.

Miall, L. C. 1874 B, pl. xlvii.

1878 B.

1880 A, p. 289.

Miller, S. A. 1889 A, p. 593.

Pictet, F. J. 1854 A, p. 269.

Steinmann and Döderlein 1890 A, p. 555.

Woodward, A. S. 1888 E.

1891 A, p. 250.

Woodward and Sherborn 1890 A, p. 51.

Zittel, K. A. 1890 A, p. 127.

Ctenodus wagneri Newb.

Newberry, J. S. 1889 A, p. 172, pl. xxvii, fig. 30.

1884 A. (No description.)

1885 A, p. 121. (No description.)

Woodward, A. S. 1891 A, p. 255.

Devonian (Cleveland shale); Ohio.

SAGENODUS Owen. Type *S. inæqualis* Owen.

Owen, R. 1867 B, p. 365, pl. xii.

Barkas, W. J., 1874, Month. Rev. Dental Surg., ii, p. 588. (Petalodopsis, type *P. mirabilis*.)

Cope, E. D. 1877 E, p. 192. (Ptyonodus, type *P. vintlovii*.)

1881 K, p. 162. (Ptyonodus.)

1897 C.

Fritsch, A. 1889 B (1888), p. 66. (Ctenodus, in part.)

Gaudry, A. 1883 A, p. 239. (Megapleuron, type *M. rochei*.)

Hancock and Atthey 1868 A, p. 347.

1871 A. (Ctenodus, in part.)

1872 A, p. 272. (Ctenodus, in part.)

- Hay, O. P. 1900 A, p. 100.
 Jaekel, O. 1890 B, p. 7. (Hemictenodus.)
 Williston, S. W. 1899 D, p. 175.
 Woodward, A. S. 1890 A, p. 394. (Ptyonodus, Hemictenodus.)
 1891 A, p. 255. (Sagenodus.)
 Woodward and Sherborn 1890 A, p. 50. (Syn. of Ctenodus.)

Sagenodus angustus (Newb.).

- Newberry, J. S. 1897 A, p. 303, pl. xxiv, fig. 26. (Ctenodus.)
 Dean, B., in Newberry, J. S. 1897 A, p. 303. (Sagenodus.)
 Eastman, C. R. 1900 B, p. 37. (Dipterus.)
 Devonian (Chemung); Pennsylvania.

Sagenodus copeanus Williston.

- Williston, S. W. 1899 D, p. 178, pls. xxviii, xxxv-xxxvii.
 Coal-measures; Kansas.

Sagenodus dialophus (Cope).

- Cope, E. D. 1878 B, p. 528. (Ctenodus.)
 1881 K, p. 162. (Ctenodus.)
 1888 BB, p. 285. (Ctenodus.)
 Williston, S. W. 1899 D, p. 176.
 Woodward A. S. 1891 A, p. 261. (Sagenodus.)
 Permian; Texas.

Sagenodus foliatus Cope.

- Cope, E. D. 1897 C, pp. 76, 77, pl. i, fig. 1.
 Hay, O. P. 1900 A, p. 107.
 Williston, S. W. 1899 D, p. 177.
 Coal-measures; Illinois.

Sagenodus fossatus (Cope).

- Cope, E. D. 1877 N, p. 53. (Ctenodus.)
 Case, E. C. 1900 A, p. 705, pl. i, figs. 10a, 10b.
 Cope, E. D. 1888 BB, p. 285. (Ctenodus.)
 Williston, S. W. 1899 D, p. 176.
 Woodward, A. S. 1891 A, p. 261.
 Permian; Illinois.

Sagenodus gurleyanus (Cope).

- Cope, E. D. 1877 N, p. 54. (Ctenodus.)
 Case, E. C. 1900 A, p. 704, pl. i, figs. 8a-8c.
 Cope, E. D. 1881 K, p. 162. (Ctenodus.)
 1888 B B, p. 285. (Ctenodus.)
 Hay, O. P. 1899 E, p. 785.
 Miller, S. A. 1889 A, p. 593. (Ctenodus gurleyanus.)
 Williston, S. W. 1899 D, p. 176.
 Woodward, A. S. 1891 A, p. 261.
 Permian; Illinois.

Sagenodus heterolophus (Cope).

- Cope, E. D. 1883 K, p. 109. (Ctenodus.)
 Case, E. C. 1900 A, p. 706.
 Williston, S. W. 1899 D, p. 176.
 Woodward, A. S. 1891 A, p. 261.
 Permian; Illinois.

Sagenodus jugosus Hay.

- Hay, O. P. 1900 A, p. 107.
 Newberry, J. S. 1875 A, p. 60. (Ctenodus reticulatus; not of Newberry and Worthen, 1870.)

- Woodward, A. S. 1891 A, p. 261. (Sagenodus reticulatus.)
 Coal-measures; Ohio.

Sagenodus lacovianus Cope.

- Cope, E. D. 1897 C, p. 79, pl. i, fig. 5.
 1897 C, p. 79, pl. i, fig. 4. (S. conchiolepis.)
 Hay, O. P. 1900 A, p. 108.
 Williston, S. W. 1899 D, p. 177. (S. lacovianus, S. conchiopsis.)
 Coal-measures; Illinois.

Sagenodus occidentalis (Newb. and Worth.).

- Newberry and Worthen 1866 A, p. 19, fig. 2. (Rhizodus.)
 Cope, E. D. 1897 C, p. 75 (S. occidentalis); p. 81, pl. i, fig. 7 (S. browniae).
 Hay, O. P. 1899 E, p. 787. (Megalichthys.)
 1900 A, p. 101.
 Miller, S. A. 1889 A, p. 611, fig. 1173. (Rhizodus.)
 Newberry, J. S. 1889 A, p. 192. (Rhizodus.)
 Newberry and Worthen 1870 A, pl. iv, fig. 1. (Rhizodus.)
 Williston, S. W. 1899 D, p. 177.
 Woodward, A. S. 1891 A, p. 348. (Strepsodus?).
 Coal-measures; Illinois.

Sagenodus ohionensis (Cope).

- Cope, E. D. 1875 D, p. 410, pl. xlv, fig. 2. (Ctenodus.)
 1873 O, p. 341. (Leptophractus obsoletus, part.)
 1874 S, p. 91. (Ctenodus, without specific name.)
 Newberry, J. S. 1875 A, p. 60. (Ctenodus.)
 1889 A, p. 226; woodcut, fig. 3. (Ctenodus.)
 Woodward, A. S. 1891 A, p. 262.
 Coal-measures; Ohio.

Sagenodus paucicristatus (Cope).

- Cope, E. D. 1877 N, p. 53. (Ceratodus.)
 Case, E. C. 1900 A, p. 707, pl. i, figs. 11a, 11b.
 Cope, E. D. 1877 E, p. 192. (Ptyonodus.)
 1881 K, p. 162. (Ptyonodus.)
 1888 BB, p. 285. (Ptyonodus.)
 Williston, S. W. 1899 D, p. 175.
 Woodward, A. S. 1891 A, p. 261.
 Permian; Illinois.

Sagenodus periprion (Cope).

- Cope, E. D. 1878 B, p. 527. (Ctenodus.)
 1881 K, p. 162. (Ctenodus.)
 1888 B B, p. 285. (Ctenodus.)
 Williston, S. W. 1899 D, p. 176.
 Woodward, A. S. 1891 A, p. 261.
 Permian; Texas.

Sagenodus porrectus (Cope).

- Cope, E. D. 1878 B, p. 527. (Ctenodus.)
 1881 K, p. 162. (Ctenodus.)
 1888 B B, p. 285. (Ctenodus.)
 Williston, S. W. 1899 D, p. 176.
 Woodward, A. S. 1891 A, p. 261.
 Permian; Texas.

Sagenodus pusillus (Cope).

- Cope, E. D.* 1877 E, p. 191. (Ctenodus.)
Case, E. C. 1900 A, p. 705, pl. i, figs. 9a, 9b.
Cope, E. D. 1881 K, p. 162. (Ctenodus.)
 1888 BB, p. 285. (Ctenodus.)
Williston, S. W. 1899 D, p. 176.
Woodward, A. S. 1891 A, p. 261.
 Permian; Illinois.

Sagenodus quadratus (Newb.).

- Newberry, J. S.* 1873 A, p. 343, pl. xxxix, fig. 8. (Rhizodus.)
Cope, E. D. 1897 C, pp. 76, 77.
Eastman, C. R. 1900 B, p. 37. (Dipterus.)
Hay, O. P. 1900 A, p. 103.
Lesley, J. P. 1889 A, p. 877, figure. (Rhizodus.)
 1895 A, pl. dlxxi. (Rhizodus.)
Newberry, J. S. 1889 A, p. 192. (Rhizodus.)
Williston, S. W. 1899 D, p. 176.
Woodward, A. S. 1891 A, p. 262. (Sagenodus?)
 Coal-measures; Ohio, Illinois.

Sagenodus quincunciatus Cope.

- Cope, E. D.* 1897 C, p. 80, pl. i, fig. 6.
Hay, O. P. 1900 A, p. 109.
Newberry and Worthen 1870 A, p. 349, pl. iii, figs. 13, 14. (Rhizodus reticulatus, part.)
Williston, S. W. 1899 D, p. 177.
 Coal-measures; Illinois.

Sagenodus reticulatus (Newb. and Worth.).

- Newberry and Worthen* 1870 A, p. 349, pl. iii, fig. 9, not figs. 13, 14. (Rhizodus.)
Cope, E. D. 1897 C, p. 78, pl. i, figs. 2, 3 (Sagenodus reticulatus); p. 81, pl. i, fig. 8 (S. magister).
Hay, O. P. 1900 A, p. 106.
Williston, S. W. 1899 D, p. 177. (S. reticulatus, S. magister.)

GNATHORHIZA Cope. Type *G. serrata* Cope.

- Cope, E. D.* 1883 H, p. 629.
Miller, S. A. 1889 A, p. 598.

The systematic position of this genus is very problematical.

- Woodward, A. S.* 1891 A, p. 262. (Sagenodus?)
 Coal-measures; Illinois.

Sagenodus serratus (Newb.).

- Newberry, J. S.* 1875 A, p. 59, pl. lviii, figs. 15, 16. (Ctenodus.)
Miller, S. A. 1899 A, p. 593, fig. 1119. (Ctenodus.)
Newberry, J. S. 1889 A, p. 226, pl. xxvii, fig. 31. (Ctenodus.)
Williston, S. W. 1899 D, p. 176.
Woodward, A. S. 1891 A, p. 261. (Sagenodus.)
 Coal-measures; Ohio.

Sagenodus textilis Hay.

- Hay, O. P.* 1899 E, p. 786.
Cope, E. D. 1897 C, p. 82, pl. i, fig. 9. (S. gurleianus; preoccupied by Cope, 1877.)
Hay, O. P. 1900 A, p. 110.
Williston, S. W. 1899 D, p. 177. (S. gurleianus.)
 Coal-measures; Illinois.

Sagenodus vabasensis (Cope).

- Cope, E. D.* 1883 K, p. 110. (Ctenodus.)
Case, E. C. 1900 A, p. 704, pl. i, fig. 7.
Cope, E. D. 1888 BB, pp. 285, 288. (Ctenodus.)
Williston, S. W. 1899 D, p. 176.
Woodward, A. S. 1891 A, p. 261.
 Permian; Illinois.

Sagenodus vinslovii (Cope).

- Cope, E. D.* 1875 T, p. 410. (Ceratodus.)
Case, E. C. 1900 A, p. 703, pl. i, figs. 6a, 6b.
Cope, E. D. 1877 E, p. 192. (Ptyonodus.)
 1877 N, p. 53. (Ceratodus.)
 1881 K, p. 162. (Ptyonodus.)
 1888 BB, p. 285. (Ptyonodus.)
Williston, S. W. 1899 D, p. 176.
Woodward, A. S. 1891 A, p. 262.
 Permian; Illinois.

Gnathorhiza serrata Cope.

- Cope, E. D.* 1883 H, p. 629.
 1888 BB, p. 286.
 Permian; Texas.

CERATODONTIDÆ.

- Gill, T.* 1872 C, p. 22.
Cope, E. D. 1889 R, p. 854.
Gill, T. 1893 A, p. 130.
Günther, A. 1872 A, p. 554. (Sirenidæ, in part.)
Steinmann and Döderlein 1890 A, p. 555.

- Quenstedt, F. A.* 1885 A, p. 294. (Ceratodontia.)
Van Wijhe, J. W. 1882 A. (Ceratodus.)
Woodward, A. S. 1891 A, p. 264. (Lepidosirenidæ, part.)

CERATODUS Agassiz. Type *C. latissimus* Agassiz.

- Agassiz, L.* 1843 B (1838), iii, p. 129.
 1844 A.
Balfour, F. M. 1881 A.
Barkas, W. J. 1877 A.
 1878 A.
Beyrich, E. 1850 A, p. 153.
Bridge, T. W. 1898 A, p. 350.
Bridge, W. J. 1879 A.
Brown, C. 1900 A, p. 172.

- Cope, E. D.* 1893 N, p. 1081.
Davidoff, M. 1883 A.
Dollo, L. 1896 A.
Gadow, H. 1889 A, p. 458.
Gadow and Abbott 1895 A.
Gegenbaur, C. 1872 B.
 1876 A.
 1895 A, figs. 2, 3.
 1898 A, figures.

- Günther, A. 1870 A, p. 323.
 1871 A.
 1871 B.
 1872 A.
 1880 A, p. 357.
 Haeckel, E. 1895 A, p. 264.
 Haswell, W. A. 1883 A.
 Howes, G. B. 1887 A.
 Huxley, T. H. 1876 A.
 1876 B, xiii, pp. 389, 411.
 1880 B, p. 660.
 Klaatsch, H. 1890 A, p. 209.
 1896 A, p. 316.
 Krefft, G. 1870 A.
 Miall, L. C. 1878 A, p. 18.
 1878 B.
 Mivart, St. G. 1879 A.
 Mollier, S. 1893 A, p. 86 *et seq.*
 Newberry, J. S. 1875 A, pp. 9-27.
 Nicholson and Lydekker 1889 A, p. 953.
 Oldham, T. 1859 A.
 Pictet, F. J. 1854 A, p. 267.
 Pollard, H. B. 1894 B.
 Quenstedt, F. A. 1852 A, p. 186.
 1885 A, p. 295.
 Reis, O. M. 1897 A, p. 132.
 Röse, C. 1892 B.
 Salensky W. 1899 A, p. 181.
 Semon, R. 1899 A, p. 78.
 Stephan, P. 1900 A, p. 307.
 Teller, F. 1891 A.
 Thacher, J. K. 1877 A.
 Tomes, C. S. 1898 A, p. 264.
 Traquair, R. H. 1900 B, p. 521.
 Van Wijhe, J. W. 1882 A.
 Woodward, A. S. 1888 E.
 1891 A, p. 264.
 1898 B, p. 64.

- Zittel, K. A. 1886 A, p. 253
 1890 A, p. 132.

Ceratodus americanus Knight.

- Knight, W. C.* 1898 A, p. 186, fig. 2.
 Jurassic; Wyoming.

Ceratodus eruciferus¹ Cope.

- Cope, E. D.* 1876 H, p. 259.
 1877 G, p. 574. (Arotus?)
Woodward, A. S. 1891 A, p. 275.
 Cretaceous (Laramie); Montana.

Ceratodus favosus Cope.

- Cope, E. D.* 1884 I, p. 28.
 1888 BB, p. 286.
Woodward, A. S. 1891 A, p. 274.
 Permian; Texas.

Ceratodus güntheri Marsh.

- Marsh, O. C.* 1878 A, with figure.
King, C. 1878 A, p. 346.
Marsh, O. C. 1878 G, p. 224.
 1897 C, p. 507, fig. 67.
 Jurassic; Colorado.

Ceratodus hieroglyphus¹ Cope.

- Cope, E. D.* 1876 H, p. 260.
 1877 G, p. 574. (Arotus. 574)
 1885 D, p. 408.
Woodward, A. S. 1891 A, p. 275.
 Cretaceous (Laramie); Montana.

Ceratodus robustus Knight.

- Knight, W. C.* 1898 A, p. 186, fig. 1.
 Jurassic; Wyoming.

SYNTHETODUS Eastman. Type *S. trisulcatus* Eastman.

- Eastman, C. R.* 1898 A, p. 111.

Synthetodus trisulcatus Eastman.

- Eastman, C. R.* 1898 A, p. 112, pl. iv, figs. 1-10.
 Upper Devonian; Iowa.

Subclass TELEOSTOMI Owen.

- Owen, R.* 1866 A, p. 7.

References are here given also to the literature of the groups known as *Ganoidei* and *Teleostei*.

- Agassiz, L.* 1843 B, ii, p. 1. (Ganoidei.)
Balfour, F. M. 1882 A, p. 431. (Ganoidei.)
Baudelot, E. 1873 A.
 1873 B.
Baur, G. 1889 E. (Teleostei.)
Beard, J. 1890 A. (Teleostei, Ganoidei.)
Chamberlin, T. C. 1900 A, p. 411. ("Teleostomes.")
Cope, E. D. 1872 C, p. 318 (Ganoidei.); p. 396 (Actinopteri).
 1877 N, p. 56. (Hyopomata.)
 1877 O, p. 41. (Hyopomata.)
 1878 A, p. 292. (Hyopomata.)
 1884 I, p. 46. (Hyopomata.)
 1884 N, p. 579. (Hyopomata.)

- Cope, E. D.* 1884 HH. (Hyopomata.)

- 1885 G. (Hyopomata.)
 1887 O, p. 1015.
 1889 R, pp. 854, 855.
 1890 B.
 1891 E.
 1891 N, p. 10.
 1898 B, pp. 18, 30.
Dean, B. 1895 A, p. 139.
Gadow, H. 1898 A, p. 7.
Gadow and Abbott 1895 A. (Ganoidei, Teleostei.)
Gegenbaur, C. 1895 A.
 1898 A.
Gill, T. 1872 C, p. 1.
 1873 B.
 1873 D.
 1893 A, p. 130. ("Teleostomes.")
 1896 C, p. 912.

¹ See the genus of *Ichthyodorulites Eucenius*,

- Goepfert, E. 1895 A, p. 158. (Teleostei.)
 Günther, A. 1871 A, p. 428. (Ganoidei, Teleostei.)
 1872 A, p. 554. (Ganoidei.)
 1880 A, p. 373. (Teleostei.)
 1881 A, p. 688. (Ganoidei, Teleostei.)
 Haeckel, E. 1895 A, p. 244 (Ganoides); p. 252 (Teleostei).
 Hallmann, E. 1837 A, p. 52.
 Hay, O. P. 1895 A.
 1898 C, p. 342.
 Hollard, H. 1860 A.
 Huxley, T. H. 1858 C. (Teleostei, Ganoidei.)
 1861 B, p. 29. (Teleostei.)
 1872 A, p. 121 (Ganoidei); p. 130 (Teleostei).
 1883 A. (Teleostei.)
 Jordan and Evermann 1896 A, p. 97.
 Klaatsch, H. 1890 A, p. 155.
 1894 A.
 Klein, E. F. 1879 A.
 1881 A.
 1885 A.
 Klein, E. F. 1889 A.
 Kner, R. 1866 A.
 Kölliker, A. 1859 A. (Teleostei, Ganoidei.)
 Köstlin, O. 1844 A.
 Lütken, C. 1868 B. (Ganoidei, Teleostei.)
 1873 A. (Ganoidei.)
 Miall, L. C. 1878 A. (Ganoidei.)
 Müller, J. 1846 C.
 Parker, W. K. 1874 A.
 Reis, O. M. 1895 C, p. 162.
 Röse, C. 1892 A. (Teleostei.)
 Steinmann and Döderlein 1890 A, p. 556.
 Stephan, P. 1900 A. ("Téléostéens," "Ganoïdes.")
 Traquair, R. H. 1877 B. (Ganoidei.)
 Ussow, S. A. 1898 A.
 Vaillaint, L. 1883 A.
 Woodward, A. S. 1891 A, pp. xxi, 316.
 1898 B, p. 69.
 Zittel, K. A. 1890 B, p. 133 (Ganoidei); p. 252 (Teleostei).

Superorder CROSSOPTERYGIA.

- Baur, G. 1896 C, p. 659.
 Bridge, W. J. 1879 A.
 Bridge, T. W. 1889 A, p. 118. (Polypterus.)
 1896 A, p. 541. (Polypterus.)
 1898 A, p. 371.
 Brown, C. 1900 A, p. 172.
 Chamberlin, T. C. 1900 A, p. 411. ("Crossopterygians.")
 Cope, E. D. 1872 C, p. 326.
 1877 N, p. 56.
 1877 O, p. 41.
 1878 A, p. 293.
 1885 G, p. 237.
 1887 O, p. 1017. (Crossopterygia and Rhipidopterygia.)
 1887 S, p. 325.
 1889 R, p. 885. (Crossopterygia and Rhipidopterygia.)
 1890 B.
 1891 B, p. 459 (Rhipidopterygia); p. 460 (Crossopterygia.)
 1891 E, p. 480.
 1891 N, p. 19. (Crossopterygia, Rhipidopterygia.)
 1898 B, p. 30. (Crossopterygia, Rhipidopterygia.)
 Davidoff, M. 1880 B. (Polypterus.)
 Dean, B. 1895 A, p. 148.
 Dollo, L. 1896 A, p. 105.
 Emery, C. 1879 B.
 Gadow, H. 1898 A, p. 7. (Crossopterygii.)
 Gegenbaur, C. 1890 B, p. 104, pl. viii, fig. 6. (Polypterus.)
 1895 A.
 Gegenbaur, C. 1895 B.
 1898 A.
 Gill, T. 1872 C, p. 22.
 1893 A, p. 130.
 Goepfert, E. 1895 A, p. 148.
 Günther, A. 1872 A, p. 555.
 Haeckel, E. 1895 A, p. 249. (Crossopterygii.)
 Hay, O. P. 1899 F, p. 682.
 Howes, G. B. 1887 A, p. 19.
 Huxley, T. H. 1861 B, p. 24. (Crossopterygidae, as suborder.)
 1866 A.
 1872 A, p. 127. (Crossopterygidae.)
 1876 A.
 Jaekel, O. 1890 B, p. 8.
 Klaatsch, H. 1890 A, p. 218.
 1896 A.
 Lütken, C. 1873 A, p. 45. (Crossopteri.)
 Newberry, J. S. 1873 A, p. 255.
 Orr, H. 1885 A.
 Osborn, H. F. 1899 I, p. 158.
 Pollard, H. B. 1892 A. (Polypterus.)
 Reis, O. M. 1897 A, p. 130.
 Ryder, J. 1886 A.
 Steinmann and Döderlein 1890 A, p. 560.
 Traquair, R. H. 1870 A. (Polypterus.)
 1875 C, p. 394.
 1890 B, p. 517. (Crossopterygii.)
 Van Wijhe, J. W. 1882 A, p. 251.
 Woodward, A. S. 1891 A, p. 316.
 1893 C.
 1898 B, p. 69.
 Zittel, K. A. 1890 A, p. 168.
 1896 A, p. 408.

Superorder RHIPIDISTIA Cope.

- Cope, E. D. 1887 O, p. 1017.
 1887 O, p. 1018. (Taxistia.)
 1889 R, p. 855 (Rhipidistia); p. 856 (Taxistia).
 1891 B, p. 460 (Rhipidistia); p. 462 (Taxistia).
 Cope, E. D. 1891 E. (Rhipidistia, Taxistia.)
 1891 N, p. 19. (Rhipidistia, Taxistia.)
 1898 B, pp. 30, 31. (Rhipidistia, Taxistia.)
 Traquair, R. H. 1891 A, p. 127.
 Woodward, A. S. 1891 A, p. 318.
 1898 B, p. 71.

HOLOPTYCHIIDÆ.

- Collinge, W. E. 1893 A, p. 5.
 Cope, E. D. 1889 E, p. 856.
 Günther, A. 1880 A, p. 365.
 1881 A, p. 687.
 Lütken, C. 1873 A, p. 34. (Cyclodipterini)
 Nicholson and Lydekker 1889 A, p. 968.
 Owen, R. 1860 E, p. 132.
 Rohon, J. V. 1899 A, p. 41.
- Steinmann and Döderlein 1890 A, p. 560.
 Traquair, R. H. 1889 C.
 1900 B, p. 518.
 Woodward, A. S. 1891 A, p. 321.
 1893 E, p. 450.
 1898 B, p. 72.
 Zittel, K. A. 1890 A, p. 176. (Cyclodipterini.)
- HOLOPTYCHIUS Agassiz.** Type *H. nobilissimus* Agassiz.
- Agassiz L.*, 1839, in Murchison's Silur. Syst., p. 599.
 (Holoptychus, misprint.)
 1844 A.
 1844 B.
- Anderson, J. 1860 A.
 1861 A.
- Collinge, W. E. 1893 A, p. 6.
 Egerton, P. H. 1859 A, p. 126.
 Emery, C. 1897 B, p. 147.
 Huxley, T. H. 1861 B, p. 5, fig. 5.
 Jaekel, O. 1894 B, p. 148.
 Klaatsch, H. 1890 A, p. 221.
 Leidy, J. 1856 S, p. 162.
 Lohest, M. 1888 A, p. 121.
 McCoy, F. 1853 A.
 1855 A, p. 593.
 Miller, H. 1859 A, pl. xiv.
 Miller, S. A. 1889 A, p. 599.
 Newberry, J. S. 1856 A.
 Nicholson and Lydekker 1889 A, p. 968.
 Pictet, F. J. 1854 A, p. 145.
 Quenstedt, F. A. 1852 A, p. 229.
 1885 A, p. 350.
 Rohon, J. V. 1892 B.
 1899 A, p. 41.
 Steinmann and Döderlein 1890 A, p. 561.
 Traquair, R. H. 1888 B, p. 512.
 1900 B, p. 519.
 Williamson, W. C. 1849 A, p. 457, pl. xlii, figs. 21-24.
 Woodward, A. S. 1891 A, p. 322.
 1892 E.
 Young, J. 1866 B, p. 601.
 Zittel, K. A. 1890 A, p. 178.
- Holoptychius americanus Leidy.**
Leidy, J. 1856 S, p. 163, pl. xvi, figs. 9, 10; pl. xvii, figs. 1-3 (not fig. 4).
 Cope, E. D. 1892 L, p. 222.
 1892 X.
 1897 C, p. 72.
 DeKay, J. E. 1842 B, p. 385. (H. nobilissimus.)
 Eastman, C. R. 1899 F, pp. 321, 327.
 Hall, J. 1843 A, p. 281, text figs. 130.² (Holoptychus nobilissimus.)
 Lesley, J. P. 1889 A, p. 284, figures. (H. americanus, H. nobilissimus.)
 Lohest, M. 1888 A, p. 139. (H. nobilissimus.)
 Miller, S. A. 1889 A, p. 599, fig. 1438.
 Newberry, J. S. 1873 A, pp. 271, 272.
 1889 A, pp. 107, 113, pl. xix, figs. 12, 13.
 Redfield, W. C. 1841 A, p. 24. (H. nobilissimus.)
 Whitfield and Hovey 1900 A, p. 348.
 Williams, H. S. 1887, A, pp. 27, 28. ("Holoptychius.")
- Woodward, A. S. 1891 A, p. 326.
 Young, J. 1866 B, p. 599.
 Devonian (Catskill, Ithaca); Pennsylvania, New York.
- Holoptychius filiosus Cope.**
Cope, E. D. 1892 L, p. 228, pl. vii, fig. 3.
 1897 C, p. 72.
 Devonian (Chemung); Pennsylvania.
- Holoptychius flabellatus Cope.**
Cope, E. D. 1897 C, p. 75, pl. ii, fig. 3.
 Devonian (Catskill?); Pennsylvania.
- Holoptychius giganteus Agassiz.**
Agassiz, L. 1844 B, pp. 73, 140, pl. xxiv, figs. 3-10.
 Cope, E. D. 1892 L, p. 222.
 1897 C, p. 72.
 Lohest, M. 1888 A, p. 146, pl. vi, figs. 2, 3; pl. vii, figs. 5, 6.
 McCoy, F. 1855 A, p. 594 (H. giganteus); p. 595 (H. princeps).
 Newberry, J. S. 1889 A, p. 101, pl. xix, figs. 15, 16.
 Woodward, A. S. 1891 A, p. 325.
 Devonian; Europe: (Catskill?); Pennsylvania.
- Holoptychius granulatus Newb.**
Newberry, J. S. 1889 A, p. 100, pl. xx, fig. 9.
 Whitfield and Hovey, 1900 A, p. 348.
 Woodward, A. S. 1891 A, p. 331.
 Devonian (Chemung): Pennsylvania?.
- Holoptychius hallii Newb.**
Newberry, J. S. 1889 A, p. 114, pl. xx, figs. 10, 10a.
 Cope, E. D. 1897 C, p. 72.
 Woodward, A. S. 1891 A, p. 326.
 Devonian (Catskill): New York.
- Holoptychius latus Cope.**
Cope, E. D. 1897 C, p. 74, pl. ii, fig. 2. [Holoptychius (Glyptolepis).]
 Devonian (Catskill?); Pennsylvania.
- Holoptychius ? pustulosus Newb.**
Newberry, J. S. 1889 A, p. 100, pl. xx, figs. 11, 11a.
 Woodward, A. S. 1891 A, p. 331.
 Devonian (Chemung); Pennsylvania.
- Holoptychius quebecensis (Whit-eaves).**
Whiteaves, J. F. 1889 A, p. 77, pl. v, fig. 4. (Glyptolepis.)
 Dana, J. D. 1896 A, p. 618, fig. 970.

Traquair, R. H. 1890 A, p. 17.

1893 C, p. 265. (Gyrolepis.)

1893 D, p. 123. (Glyptolepis.)

Whiteaves, J. F. 1881 A, p. 495. (Glyptolepis microlepidotus, not of Agassiz.)

1883 A, p. 354. (Glyptolepis microlepidotus, not of Agassiz.)

1883 B, p. 162. (Glyptolepis.)

1881 C, pp. 32, 33. (Glyptolepis microlepidotus and G. "near leptopterus.")

Woodward, A. S. 1891 A, p. 336.

Upper Devonian; Province of Quebec, Canada.

Holoptychius ? radiatus Newb.

Newberry, J. S. 1889 A, p. 115, pl. xx, figs. 12-14.

Cope, E. D. 1897 C, p. 72.

Whitfield and Hovey 1900 A, p. 348.

Woodward, A. S. 1891 A, p. 331.

Devonian (Catskill?); Pennsylvania.

Holoptychius serrulatus Cope.

Cope, E. D. 1897 C, p. 71, pl. ii, fig. 1.

Devonian (Catskill?); Pennsylvania.

Holoptychius tuberculatus Newb.

Newberry, J. S. 1889 A, p. 101, pl. xix, fig. 14.

Cope, E. D. 1897 C, p. 73.

Woodward, A. S. 1891 A, p. 331.

Devonian (Chemung); Pennsylvania.

ERIPTYCHIUS Walcott. Type *E. americanus* Walcott.

Walcott, C. D. 1892 A, p. 167.

Chamberlin, T. C. 1900 A, p. 401. (No name.)

Eriptychius americanus Walcott.

Walcott, C. D. 1892 A, p. 167, pl. iv, figs. 5-11.

American Geologist 1891 E. (Holoptychius.)

Cope, E. D. 1893 I.

Dana, J. D. 1896 A, p. 509, fig. 696.

Lower Silurian (Ordovician); Colorado.

DENDRODUS Owen. Type *D. biporcatus* Owen.

Owen, R. 1841 F, p. 4.

Agassiz, L. 1844 B, pp. 61, 84, 144. (Lamnodus, Dendrodus.)

Eichwald, E. 1860 A, p. 1558.

Lohest, M. 1888 A, p. 118.

McCoy, F. 1855 A, p. 597.

Nicholson and Lydekker 1889 A, p. 969.

Owen, R. 1845 B, pp. 171, 175.

1860 E, p. 133.

Pander, C. H. 1860 A, pp. 27, 53.

Pictet, F. J. 1854 A, p. 147.

Quenstedt, F. A. 1852 A, p. 229.

Quenstedt, F. A. 1885 A, p. 351.

Rohon, J. V. 1889 B, p. 1-52, pls. i, ii.

Traquair, R. H. 1889 C, p. 490.

Trautschold, H. 1880 C, p. 139.

1889 B.

Woodward, A. S. 1891 A, p. 338.

Zittel, K. A. 1890 A, p. 177.

Dendrodus arisaigensis Whiteaves.

Whiteaves, J. F. 1898 A, p. 401, fig. 1.

Silurian or Devonian; Nova Scotia.

APEDODUS Leidy. Type *A. priscus* Leidy.

Leidy, J. 1856 S, p. 164.

Miller, S. A. 1889 A, p. 587.

Woodward, A. S. 1891 A, p. 322. (Syn.? of Holoptychius.)

Young, J. 1866 B. (Syn. of Rhizodus.)

Apedodus priscus Leidy.

Leidy, J. 1856 S, p. 165, pl. xvii, figs. 5-7.

Newberry, J. S. 1889 A, p. 108.

Woodward, A. S. 1891 A, p. 340.

Devonian (Catskill); Pennsylvania.

MEGALICHTHYIDÆ nom. nov.

The following authors denominate this family

Rhizodontidæ.

Collinge, W. E. 1893 A, p. 5.

Nicholson and Lydekker 1889 A, p. 969.

Steinmann and Döderlein 1890 A, p. 561.

Traquair, R. H. 1881 B, p. 179.

Traquair, R. H. 1888 B, p. 514.

1891 A, p. 127.

1900 B, p. 517.

Woodward, A. S. 1891 A, p. 346.

1898 B, p. 74.

MEGALICHTHYS Agassiz and Hibbert. Type *M. hibberti* Agassiz and Hibbert.

Agassiz and Hibbert, in Hibbert, S. 1836 A, p. 202.

Unless otherwise indicated, the name *Rhizodus* of Owen is employed for this genus by the following writers. *Megalichthys* of Agassiz and Hibbert has, however, priority.

Agassiz, L. 1835 A, p. 646. (Megalichthys.)

1844 B, p. 69.

Atthey, T. 1877 A.

Barkas, T. P. 1873 A, p. 41.

Eichwald, E. 1860 A, p. 1571. (Holoptychius.)

Gaudry, A. 1883 A, p. 236.

Hancock and Atthey 1868 A, p. 346.

Hay, O. P. 1899 E, p. 786.

Klaatsch, H. 1890 A, p. 220.

McCoy, F. 1855 A, p. 612.

Miall, L. C. 1875 B, fig. 1.

- Miller, S. A. 1889 A, p. 611.
 Newberry, J. S. 1868 A, p. 145.
 1889 A, pp. 192, 340.
 Newberry and Worthen 1866 A, p. 18.
 Nicholson and Lydekker 1889 A, p. 970.
 Owen, R. 1845 B (1840), p. 55, pls. xxxv-xxxvii.
 (Rhizodus; type *Megalichthys hibberti* Agassiz and Hibbert.)
 Roemer, F. 1865 A.
 Steinmann and Döderlein 1890 A, p. 561.
 Stock, T. 1881 B, p. 77.
 Traquair, R. H. 1875 B.
 1877 C.
 1891 A, p. 127.
 Woodward, A. S. 1891 A, p. 342.
 1898 B, p. 74.
 Woodward and Sherborn 1890 A, p. 178.
 Young, J. 1866 B, p. 599.
 Zittel, K. A. 1890 A, p. 182.

Megalichthys anceps (Newb.).

- Newberry, J. S.* 1888 C. (Rhizodus.)
 Dana, J. D. 1888 A. (Rhizodus.)
 Newberry, J. S. 1889 A, p. 191, pl. xliii, fig. 1.
 (Rhizodus.)
 Woodward, A. S. 1891 A, p. 346. (Rhizodus.)
 Subcarboniferous (St. Louis); Illinois.

Megalichthys angustus Newb.).

- Newberry, J. S.* 1856 B, p. 99. (Rhizodus.)

- Hay, O. P. 1899 E, p. 787.
 Hitchcock, C. H. 1868 B. (Rhizodus.)
 Lesley, J. P. 1889 A, p. 875, figure. (Rhizodus.)
 Newberry, J. S. 1868 A, p. 145. (Rhizodus.)
 1873 A, p. 342, pl. xxxix, fig. 6. (Rhizodus.)
 1889 A, p. 192. (Rhizodus.)
 Woodward, A. S. 1891 A, p. 348. (Rhizodus.)
 Coal-measures; Ohio.

Megalichthys incurvus (Newb.).

- Newberry, J. S.* 1856 B, p. 99. (Rhizodus.)
 Hay, O. P. 1899 E, p. 787.
 Woodward, A. S. 1891 A, p. 348. (Rhizodus.)
 Coal-measures; Ohio.

Megalichthys lancifer (Newb.).

- Newberry, J. S.* 1856 B, p. 99. (Rhizodus.)
 Dawson, J. W. 1863 D, p. 11. (Rhizodus.)
 1868 A, p. 210, fig. 56a. (R. lancifer?).
 1878 A, p. 210, fig. 56a. (Rhizodus.)
 1894 A, p. 269. (Rhizodus.)
 Hay, O. P. 1899 E, p. 787.
 Lesley, J. P. 1889 A, p. 876, figure. (Rhizodus.)
 Newberry, J. S. 1873 A, p. 342, pl. xxxix, fig. 9.
 (Rhizodus.)
 1889 A, p. 192. (Rhizodus.)
 Woodward, A. S. 1891 A, p. 348. (Rhizodus.)
 Coal-measures; Ohio.

RABDIOLEPIS Emmons. Type *R. speciosa* Emmons.

- Emmons, E.* 1857 A, p. 45.
 1860 A, p. 183.
Rabdiolepis speciosa Emmons.
Emmons, E. 1857 A, p. 45, fig. 17.
 Cope, E. D. 1875 V, p. 30. (Rhabdolepis.)

- Emmons, E.* 1860 A, p. 183, fig. 161.
 Wheatley, C. M. 1861 A, p. 44. (Radiolepis.)
 Woodward, A. S. 1891 A, p. 354.
 Triassic (Chatham); North Carolina, Pennsylvania?.

STREPSODUS Young. Type *Holoptychius sauroides* Binney.

- Young, J.* 1866 B, p. 602.
 Barkas, T. P. 1873 A, p. 32, figs. 113-119 (Strepsodus); pp. 75, 94, figs. 194, 223, 224 (Labyrinthodontosaurus).
 Hancock and Atthey 1868 A, p. 353.
 1870 A.
 Ward, J. 1890 A, p. 160.
 Woodward, A. S. 1891 A, p. 348.
 Young J. 1856 B, p. 601, fig. 7. (Dendroptychius.)

Strepsodus arenosus Hay.

- Hay, O. P.* 1900 A, p. 113, fig. 3.
 Subcarboniferous; Pennsylvania.

Strepsodus dawsoni Hay.

- Hay, O. P.* 1900 A, p. 114.

- Dawson, J. W. 1868 A, p. 210, fig. 56b. (Rhizodus lancifer, part.)
 1878 A, p. 210, fig. 56b. (R. lancifer, part.)
 Coal-measures; Nova Scotia.

Strepsodus hardingi (Dawson).

- Dawson, J. W.* 1868 A, p. 255, fig. 77a-d. (Rhizodus.)
 Dana, J. D. 1888 A. (Rhizodus.)
 Dawson, J. W. 1878 A, p. 255, fig. 77a-d. (Rhizodus.)
 Hay, O. P. 1900 A, p. 111.
 Lesley, J. P. 1889 A, p. 876, figure. (Rhizodus.)
 Woodward, A. S. 1891 A, p. 353.
 Subcarboniferous; Nova Scotia.

RHIZODOPSIS Young. Type *Holoptychius granulatus* Salter

- Young, J.* 1866 B, p. 596.
 Barkas, T. P. 1873 A, p. 23, figs. 59-69 (Rhizodopsis); p. 38, figs. 143, 144 (Orthognathus, type *O. reticulosus*).
 Hancock and Atthey 1868 A, p. 349.

- Nicholson and Lydekker 1889 A, p. 970.
 Owen R. 1867 B, p. 325 (Dittodus, part); p. 354 (Ganaloodus part); p. 366 (Characodus); p. 370 (Gastrodus).
 Roemer, F. 1865 A. (Rhizodus, part.)

Traquair, R. H. 1881 B, p. 169.
 Ward, J. 1890 A, p. 161, pl. viii, figs. 5-7.
 Williamson, W. C. 1849 A, p. 457, pl. xlii, figs.
 21-23. (Holoptychius, part.)
 Woodward, A. S. 1891 A, p. 354.
 Young, J. 1866 B, p. 596, fig. 8.

Zittel, K. A. 1890 A, p. 181.

Rhizodopsis? mazonius Hay.

Hay, O. P. 1900 A, p. 110.
 Coal-measures, Illinois.

CÆLOSTEUS Newb. Type *C. ferox* Newb.

Newberry, J. S. 1887 B.
 Cope, E. D. 1890 H.
 Miller, S. A. 1892 A, p. 714.
 Newberry, J. S. 1889 A, p. 188.
 Woodward, A. S. 1891 A, p. 346.

Cælosteus ferox Newb.

Newberry, J. S. 1887 B.
 Cope, E. D. 1888 P.
 Newberry, J. S. 1889 A, p. 190, pl. xxxv, figs. 1-4.
 Woodward, A. S. 1891 A, p. 346.
 Subcarboniferous (St. Louis): Illinois.

SAURIPTERIS Hall. Type *S. taylori* Hall.

Hall, J. 1843 A, p. 282.
 1840, Ann. Rep. Geol. Surv., N. Y., 4th dist.,
 p. 453. (Sauritolepis, nom. nud.)
 1843 A, p. 282, footnote. (Sauritolepis.)
 Newberry, J. S. 1873 A, pp. 271, 272. (Holopty-
 chius? and Bothriolepis?)
 Woodward, A. S. 1890 A, p. 393.
 1891 A, p. 364. (Sauripterus.)

Sauripteris taylori Hall.

Hall, J. 1843 A, p. 282, text figs. 130¹, 131.

Newberry, J. S. 1873 A, pp. 271, 272. (Holopty-
 chius? and Bothriolepis?)
 1889 A, p. 113. (Sauripterus.)
 Lesley, J. P. 1889 A, p. 94 (Bothriolepis); p. 286,
 figure (Holoptychius); *Errata*, p. xi (Saurip-
 teris).
 Whiteaves, J. F. 1880 A, p. 133.
 Whitfield and Hovey, 1900 A, p. 348.
 Williams, H. S. 1887 A, p. 101. (Sauripterus.)
 Woodward, A. S. 1890 A, p. 393.
 1891 A, p. 365.
 Devonian (Catskill); Pennsylvania.

EUSTHENOPTERON Whiteaves. Type *E. foordii* Whiteaves.

Whiteaves, J. F. 1881 A, p. 495.
 Miller, S. A. 1889 A, p. 597.
 Nicholson and Lydekker 1889 A, p. 970.
 Traquair, R. H. 1900 B, p. 517.
 Whiteaves, J. F. 1883 A, p. 354.
 1883 B, p. 161.
 1881 C, p. 30.
 1899 A, p. 411.
 Woodward, A. S. 1891 A, p. 361.
 1898 B, p. 76.
 Zittel, K. A. 1890 A, p. 180.

Eusthenopteron foordii Whiteaves.

Whiteaves, J. F. 1881 A, p. 495.
 Bridge, T. W. 1896 A, p. 588.
 Cope, E. D. 1892 N, p. 280, fig. 1.

Dana, J. D. 1896 A, p. 618, fig. 971.
 Dean, B. 1895 A, p. 152, fig. 154.
 Jaekel, O. 1892 A, p. 91.
 1896 A, p. 8.
 Traquair, R. H. 1890 A, p. 17.
 1893 C, p. 266.
 1893 D, p. 124.
 Whiteaves, J. F. 1883 A, p. 354.
 1883 B, p. 161.
 1881 C, p. 31, text fig.
 1889 A, p. 78, pl. v, fig. 5; pls. vi, vii; p. 91,
 pl. x, fig. 1.
 Woodward, A. S. 1891 A, p. 362.
 1898 B, p. 77, fig. 58.

Upper Devonian; Province of Quebec, Canada.

OSTEOLEPIDÆ

Agassiz, L. 1843 B (1835), ii, p. 117. (Osteolepis.)
 1844 B, p. 50. (Osteolepis.)
 Collinge, W. E. 1893 A, p. 5.
 Cope, E. D. 1889 R, p. 856.
 Huxley, T. H. 1861 B. (Saurodipterini.)
 Klaatsch, H. 1896 A, p. 318. ("Rhombodipte-
 rinen.")
 Lütken, C. 1873 A, p. 33. (Rhombodipterini.)
 McCoy, F. 1855 A, p. 585. (Saurodipteridæ.)
 Nicholson and Lydekker 1889 A, p. 971. (Rhom-
 bodipterini.)

Pander, C. H. 1860 A. ("Saurodipterinen.")
 Rohon, J. V. 1892 A, p. 29.
 1899 B, p. 13. ("Osteolepiden.")
 Steinmann and Döderlein 1890 A, p. 562. (Rhom-
 bodipteridæ.)
 Traquair, R. H. 1891 A, p. 127.
 1900 B, p. 517.
 Woodward, A. S. 1891 A, p. 367.
 1898 B, p. 77.
 Zittel, K. A. 1890 A, p. 183. (Rhombodipterini.)

Spermiodus portulacæ
 18147 p438 fig 4
 Pander
 Traquair
 T. H.

PARABATRACHUS Owen. Type *P. colei* Owen.

Owen, R. 1853 D, p. 67.

Unless otherwise indicated the following authorities use for this genus the name *Megalichthys*. Nevertheless, the name *Megalichthys* was originally based on materials belonging to a different genus and species. See p. 359.

Agassiz, L. 1843 B, ii, pt. ii, pp. 89, 154. (Not *Megalichthys* of 1836.)

Barkas, T. P. 1873 A, p. 35.

Cope, E. D. 1880 A, p. 52. (Ectosteorhachis.)

1883 H, p. 628. (Ectosteorhachis.)

1891 B, p. 457.

Gaudry, A. 1883 A, p. 234.

Hay, O. P. 1899 E, p. 788. (Parabatrachus.)

Huxley, T. H. 1861 B, p. 12.

1863 A, p. 67. (Parabatrachus.)

Klaatsch, H. 1890 A, p. 220.

McCoy, F. 1848 A, p. 3. (Centrodus, type *C. striatulus*, preoccupied.)

Miall, L. C. 1884 A.

Miller, S. A. 1889 A, p. 596. (Ectosteorhachis.)

Newberry, J. S. 1873 A, pp. 256, 343.

1889 A, p. 215.

Nicholson and Lydekker 1889 A, pp. 970, 972.

Pictet, F. J. 1854 A, p. 179.

Quenstedt, F. A. 1852 A, p. 227.

1885 A, p. 348.

Roemer, F. 1865 A.

Traquair, R. H. 1881 B, p. 178.

1884 A.

Wellburn, E. D. 1900 A, p. 52.

Williamson, W. C. 1849 A, p. 456, pl. xlii, figs. 16-19.

Woodward, A. S. 1891 A, p. 378.

1892 B, p. 233.

Young, J. 1866 B.

Zittel, K. A. 1890 A, p. 184.

Parabatrachus ciceronius (Cope).

Cope, E. D. 1883 H, p. 628. (Ectosteorhachis.)

1883 P. (Ectosteorhachis.)

1888 BB, p. 286. (Ectosteorhachis.)

1891 B, p. 457. (Megalichthys.)

Hay, O. P. 1899 E, p. 788.

Wellburn, E. D. 1900 A, p. 60. (Megalichthys.)

Woodward, A. S. 1891 A, p. 388. (Megalichthys.)
Permian; Texas.

Parabatrachus macropomus (Cope).

Cope, E. D. 1892 L, p. 226, pl. viii. (Megalichthys.)

Cope, E. D. 1894 F, pl. xix, fig. 1. (Megalichthys.)

Hay, O. P. 1899 E, p. 788.

Carboniferous; Kansas.

Parabatrachus maxillaris (Agassiz).

This species is known in all scientific works as *Megalichthys hibberti*. The earliest specific name available is, however, *maxillaris*. Most of the authors here cited use the name *M. hibberti*.

Agassiz, L. 1843 B, ii, pt. ii, pp. 89-96, pls; lxiii, lxiii a, lxiv (M. hibberti); p. 96 (M. maxillaris).

Cope, E. D. 1880 A, p. 58.

Fleming, J., 1835, Edinb. New Phil. Jour., xix, p. 314, pl. iv, figs. 1-3. (Ichthyolithus clackmannensis.¹)

Hay, O. P. 1899 E, p. 788. (P. maxillaris.)

Miall, L. C. 1884 A, p. 347, figs. 1-4, 6.

Newberry, J. S. 1873 A, p. 343, pl. xl, fig. 3. ("Megalichthys.")

1889 A, p. 215.

Traquair, R. H. 1884 A.

Ward, J. 1890 A, p. 162, pl.

Wellburn, E. D. 1900 A, p. 52, pls. xiv-xvii, xix.

Whiteaves, J. F. 1881 D, p. 36. (Psammodus bretonensis.)

Williamson, W. C. 1849 A, p. 450, pl. xli, fig. 15; pl. xlii, figs. 16-19.

Woodward, A. S. 1891 A, pp. 378, 388.

Woodward and Sherborn 1890 A, p. 117.

Young, J. 1866 B.

Coal-measures; Great Britain, Cape Breton Island. Scales and bones not distinguishable as different have been found in Ohio and in Nova Scotia.

Parabatrachus nitidus (Cope).

Cope, E. D. 1880 A, p. 52. (Ectosteorhachis.)

1888 B B, p. 286. (E. nitidus.)

1891 B, p. 457, pl. xxxii, figs. 8, 9. (Megalichthys.)

1891 C. (Megalichthys.)

Hay, O. P. 1899 E, p. 788.

Woodward, A. S. 1891 A, p. 388. (Megalichthys.)
Permian; Texas.

GLYPTOPOMUS Agassiz. Type *G. minor* Agassiz.

Agassiz, L. 1844 B, p. 57.

Huxley, T. H. 1861 B, p. 4.

1866 A, p. 3.

Pictet, F. J. 1854 A, p. 193.

Woodward, A. S. 1891 A, p. 389.

Glyptopomus sayrei Newb.

Newberry, J. S. 1878 A, p. 189.

1889 A, p. 116, pl. xviii, fig. 1.

Woodward, A. S. 1891 A, p. 390.

Devonian (Catskill); Pennsylvania.

ONYCHODONTIDÆ.

Woodward, A. S. 1891 A, p. 391.

| Rohon, J. V. 1899 A, p. 60.

¹ *Ichthyolithus* was not regarded as a generic name.

ONYCHODUS Newb. Type *O. sigmoides* Newb.

- Newberry, J. S. 1857 C, p. 124.
 Claypole, E. W. 1896 B, p. 354.
 Eastman, C. R. 1900 B, p. 36.
 1900 C, p. 392.
 Jaekel, O. 1893 B, p. 175.
 Miller, S. A. 1889 A, p. 602.
 Newberry, J. S. 1857 A, p. 148.
 1862 A, p. 77, fig. 3.
 1870 B, p. 152.
 1873 A, pp. 256, 264, 265, 273, 296.
 1888 B, p. 118.
 1889 A, p. 53.
 Newton, E. T. 1892 A.
 Nicholson and Lydekker 1889 A, p. 968.
 Rohon, J. V., 1899 A, p. 60.
 Woodward, A. S. 1888 D.
 1889 B.
 1890 A, p. 391.
 1891 A, p. 392.
 Zittel, K. A. 1890 A, p. 179.

Onychodus ortonii Newb.

- Newberry, J. S. 1889 A, p. 71, pl. xix, figs. 1, 1a.
 1888 B, p. 118. (Insufficient description.)
 Woodward, A. S. 1891 A, p. 393.
 Devonian (Huron shale); Ohio.

Onychodus sigmoides Newb.

- Newberry, J. S. 1857 C, p. 124. (*O. sigmoides*, *O. hopkinsi*.)
 Eastman, C. R. 1899 B. pp. 278, 287.
 1899 F, p. 321, figs. 2, 3.
 Hitchcock, Fanny R. 1888 A.
 Lesley, J. P. 1889 A, p. 497, figures.
 1892 A, pl. cl.
 Miller, S. A. 1889 A, p. 603, figs. 1150, 1151.
 Newberry, J. S. 1862 A, p. 77, fig. 3. (*O. hopkinsi*.)
 1873 A, pp. 265, 299, pl. xxvi, figs. 1-5; pl. xxvii, figs. 1, 2 (*O. sigmoides*); pp. 270, 302 (*O. hopkinsi*).
 1888 B, p. 118. (*O. sigmoides*, *O. hopkinsi*.)
 1889 A, p. 56, pl. xxxvi, figs. 1-4; pl. xxxvii, figs. 1-10 (*O. sigmoides*); p. 99 (*O. hopkinsi*).
 Woodward, A. S. 1891 A, p. 329 (*O. sigmoides*); p. 393 (*O. hopkinsi*).
 Devonian (Corniferous); Ohio, New York: (Chemung); New York.
 O. sigmoides and *O. hopkinsi* are united on the authority of Dr. C. R. Eastman.

Onychodus sp. indet.

- Whiteaves, J. F. 1892 A, p. 356. (No description.)
 Devonian; Manitoba.

Order ACTINISTIA Cope.

- Cope, E. D. 1887 O, p. 1017.
 1889 R, p. 855.
 1891 B, p. 460.
 1891 E.

- Cope, E. D. 1891 N, p. 19.
 Woodward, A. S. 1891 A, p. 394.
 1898 B, p. 78.

CŒLACANTHIDÆ.

- Agassiz, L. 1843 B, 18 ii, pt. ii, p. 168. ("Cœlacanth-thes.")
 1844 B, p. 59. ("Cœlacanth-thes.")
 1846 A, p. 45. ("Cœlacanth-thes.")
 Cope, E. D. 1877 N, p. 56.
 1878 A, p. 293.
 1889 R, p. 855.
 Dollo, L. 1896 A.
 Gegenbaur, C. 1895 B.
 Günther, A. 1872 A, p. 559.
 1880 A, p. 365.
 1881 A, p. 687.
 Haeckel, E. 1895 A, p. 136. (Cœlacanthini.)
 Huxley, T. H. 1861 B, p. 15. (Cœlacanthini.)
 1866 A. (Cœlacanthini.)

- Huxley, T. H. 1872 A, p. 128. (Cœlacanthini.)
 King, W. 1850 A, p. 235.
 McCoy, F. 1855 A, p. 589. (Cœlacanthi.)
 Newberry, J. S. 1873 A, p. 255.
 Nicholson and Lydekker 1889 A, p. 972.
 Owen, R. 1860 E, p. 131. (Cœlacanthi.)
 Pictet, F. J. 1854 A, p. 141. ("Cœlacanth-thes.")
 Reis, O. M. 1888 A.
 Steinmann and Döderlein 1890 A, p. 562.
 Vetter, B. 1881 A, p. 9. (Cœlacanthini.)
 Willemoes-Suhm, R. 1869 A.
 Woodward, A. S. 1891 A, p. 394.
 1892 E.
 1898 B, p. 78.
 Zittel, K. A. 1890 A, p. 171. (Cœlacanthini.)

CŒLACANTHUS Agassiz. Type *C. granulatus* Agassiz.

- Agassiz, L. 1843 B, Feuille (1836), p. 83; ii (1843), pt. ii, p. 170.
 1843 B, ii, pt. ii, p. 178. (Hoplopygus.)
 1844 A.
 Cope, E. D. 1873 O, p. 341. (Conchiopsis, with *C. filiferus* as type = Cœlacanthus elegans.)
 Heckel, J. J. 1850 A, p. 362.
 Huxley, T. H. 1861 B, p. 16.
 1866 A, p. 8.

- Miller, S. A. 1889 A, p. 592.
 Newberry, J. S. 1868 A, p. 144.
 1873 A, pp. 285, 337.
 1873 B. (On Conchiopsis.)
 1874 E, p. 76. (On Conchiopsis.)
 Nicholson and Lydekker 1889 A, p. 973.
 Pictet, F. J. 1854 A, p. 141.
 Reis, O. M. 1888 A, p. 71. (Rhabdoderma.)
 Vetter, B. 1881 A, p. 9.

- Ward, J. 1890 A, p. 168.
 Winckler, T. C. 1871 A.
 Woodward, A. S. 1891 A, p. 399.
 Woodward and Sherborn 1890 A, p. 39.
 Zittel, K. A. 1890 A, p. 171.

Cœlacanthus elegans Newb.

- Newberry, J. S.* 1856 B, p. 98.
Cope, E. D. 1873 O, p. 342. (*Conchiopsis filiferus*,
C. anguliferus.)
 1873 Q, p. 118.
Dean, B. 1895 A, p. 153, fig. 155.
Hancock and Atthey 1872, p. 256, pl. xvii, fig. 4.
 (*C. lepturus*.)
Hay, O. P. 1900 A, p. 116.
Huxley, T. H. 1866 A, pp. 14, 20, pl. v, figs. 1, 2, 4
 (*C. elegans*); p. 16, pl. ii, figs. 1-4; pl. iii, figs.
 1-3; pl. iv, figs. 1-6 (*C. lepturus*).
Miller, S. A. 1889 A, p. 592, fig. 1112.
Newberry, J. S. 1873 A, p. 339, pl. xl, figs. 1-1d.
 1873 B.
 1873 D, p. 30.
 1874 E, p. 76.

- Newberry, J. S.* 1889 A, p. 213.
Woodward, A. S. 1891 A, p. 403.
 Coal-measures; Ohio.

Cœlacanthus ornatus Newb.

- Newberry, J. S.* 1856 B, p. 98.
Huxley, T. H. 1866 A, p. 14.
Newberry, J. S. 1873 A, p. 340.
 1889 A, p. 227.
Reis, O. M. 1888 A, p. 5. (*Rhabdodërma*.)
Woodward, A. S. 1891 A, p. 406.
 Coal-measures; Ohio.

Cœlacanthus robustus Newb.

- Newberry, J. S.* 1856 B, p. 98.
Hay, O. P. 1900 A, p. 115.
Huxley, T. H. 1866 A, p. 14.
Newberry, J. S. 1873 A, p. 341, pl. xl, figs. 2, 2a.
 1889 A, p. 228.
Reis, O. M. 1888 A, pp. 5, 71. (*Rhabdoderma*.)
Woodward, A. S. 1891 A, p. 406.
 Coal-measures; Ohio, Illinois.

PEPLORHINA Cope. Type *P. anthracina* Cope.

- Cope, E. D.* 1873 O, p. 343.
 1873 Q, p. 418.
 1875 D, p. 409.
Newberry, J. S. 1874 E, p. 76.
Nicholson and Lydekker 1889 A, p. 969.
Woodward, A. S. 1891 A, p. 408.

Peplorhina anthracina Cope.

- Cope, E. D.* 1873 O, p. 343.
 1873 Q, p. 418.
 1875 D, p. 410, pl. xxxv, fig. 6; pl. xli, figs. 4-6.
Lesley, J. P. 1889 A, p. 622, figures.
Newberry, J. S. 1873 B.
 1874 E, p. 76.
Woodward, A. S. 1891 A, p. 408.
 Coal-measures; Ohio.

Peplorhina arctata Cope.

- Cope, E. D.* 1877 N, p. 54.
Case, E. C. 1900 A, p. 707.
Cope, E. D. 1882 B, p. 461. ("Theromorphous
 saurian.")
Woodward, A. S. 1891 A, p. 408.
 Permian; Illinois.

Peplorhina exanthematica Cope.

- Cope, E. D.* 1873 O, p. 342. (*Conchiopsis*.)
 1873 Q, p. 418.
Newberry, J. S. 1873 B. (Syn. of *P. anthracina*.)
 1874 E, p. 76. (Syn. of *P. anthracina*.)
Woodward, A. S. 1891 A, p. 408.
 Coal-measures; Ohio.

DIPLURUS Newb. Type *D. longicaudatus* Newb.

- Newberry, J. S.* 1878 B.
Dean, B. 1893 D.
 1895 A, p. 153.
Newberry, J. S. 1888 A, p. 70.
Nicholson and Lydekker 1889 A, p. 973.
Woodward, A. S. 1891 A, p. 409.
Zittel, K. A. 1890 A, p. 174.

Diplurus longicaudatus Newb.

- Newberry, J. S.* 1878 B.
Bridge, T. W. 1896 A, p. 588.
Dean, B. 1893 B.
 1895 A, p. 154, fig. 156.
Newberry, J. S. 1888 A, p. 74, pl. xx, figs. 1-5.
Woodward, A. S. 1891 A, p. 409.
 Triassic; New Jersey, Connecticut.

Superorder ACTINOPTERI Cope.

- Cope, E. D.* 1872 C, p. 325.
 1877 N, p. 56.
 1877 O, p. 41.
 1878 A, p. 293.
 1887 O, p. 1017. (*Actinopterygia*.)
 1889 R, p. 855. (*Actinopterygia*.)
 1891 B, p. 459. (*Actinopterygia*.)
 1891 N, pp. 19, 21. (*Actinopterygia*.)

- Cope, E. D.* 1898 B, pp. 30, 33. (*Actinopterygia*.)
Gadow, H. 1898 A, p. 7. (*Actinopterygia*.)
Hay, O. P. 1899 F, p. 682.
Reis, O. M. 1897 A, p. 130. ("Actinopterygier.")
Woodward, A. S. 1891 A, p. 423.
 1895 A.
 1898 B, p. 81. (*Actinopterygia*.)

Order CHONDROSTEI Müller.

Müller, J. 1846 C.

Agassiz, L. 1843 B (1833), ii, pt. i, pp. 1, 2, 3, 10.
("Lepidoides," in part; "Sauroides," in part.)

Beard, J. 1890 A, p. 182.

Bridge, W. J. 1879 A.

Cope, E. D. 1880 P. (Lysopteri.)

1872 C, p. 327.

1877 N, p. 57.

1877 O, p. 41.

1878 A, p. 293.

1887 O, p. 1017. (Podopterygia, in part.)

1889 R, pp. 855, 856 (Podopterygia, in part);
p. 857 (Lysopteri).

1891 B, p. 459 (Podopterygia, in part); p.
460 (Lysopteri).

1891 E. (Podopterygia, in part; Lysopteri.)

1891 N, pp. 19, 20. (Podopterygia.)

1898 B, pp. 30, 32. (Podopterygia.)

Egerton, P. G. 1859 B.

Gadow, H. 1898 A, p. 8.

Gegenbaur, C. 1898 A.

Gill, T. 1872 C, p. 22. (Chondroganoidei.)

1893 A, p. 130.

Goette, A. 1878 A, p. 442.

Günther, A. 1870 A, p. 332.

1880 A, p. 360.

1881 A, p. 687.

Haeckel, E. 1895 A, p. 249.

Huxley, T. H. 1872 A, p. 128.

Jordan and Evermann 1896 A, p. 102.

Klaatsch, H. 1890 A, p. 146.

Ryder, J. A. 1886 A.

Stannius, H. 1854 A.

Thacher, J. K. 1877 A.

1877 B.

Traquair, R. H. 1879 A, p. 380. (Acipenseroidi.)

1877 B.

1887 A.

Woodward, A. S. 1889 H, p. 43.

1891 A, pp. v, 423.

1895 A, p. v.

1898 B, p. 82.

Zittel, K. A. 1890 A, p. 163 (Chondrostei); p. 186
(Heterocerci).

Zograf, N. 1896 A.

PALÆONISCIDÆ.

Bridge, W. J. 1879 A, p. 723.

Cope, E. D. 1889 R, p. 858.

1891 E.

Fritsch, A. 1895 A, pp. 83, 122.

Günther, A. 1880 A, p. 369.

1881 A, p. 687.

Kosmak, G. W. 1895 A, p. 20.

Nicholson and Lydekker 1889 A, p. 976.

Owen, R. 1860 E, p. 136.

Steinmann and Döderlein 1890 A, p. 565.

Traquair, R. H. 1877 B.

1891 A, p. 128.

Vogt, C. 1852, Zool. Briefe., ii. (Palæoniscida.)

Woodward, A. S. 1889 H, p. 43.

1891 A, p. 425.

1893 E, p. 450.

1895 A, p. vi.

1898 B, p. 82.

Zittel, K. A. 1890 A, p. 188.

GONATODUS Traquair. Type *G. punctatus* (Agassiz).

Traquair, R. H. 1877 A, p. 555.

1890 F, p. 399. (Gonatodus, Drydenius?)

Ward, J. 1890 A, p. 178.

Woodward, A. S. 1891 A, p. 434.

Gonatodus brainerdi (Thomas).

Thomas, W. H. B. 1853, Cleveland Times, Sept. 14,
as Palæoniscus brainerdi (*vide* J. S. Newberry).

Brainerd, — 1852 A, p. 18, figs. 1-3. ("Palæoniscus.")

Hitchcock, C. H. 1868 B, p. 187. (Palæoniscus; no description.)

Lesley, J. P. 1889 A, p. 584, figure. (Palæoniscus.)

Newberry, J. S. 1862 A, p. 78. (Palæoniscus.)

1868 A, p. 145. (Palæoniscus.)

1873 A, pp. 281, 346. (Palæoniscus.)

1889 A, p. 125, pl. xxxiv, figs. 1, 2. (Gonatodus.)

Woodward, A. S. 1891 A, p. 436.

Devonian (Berea grit); Ohio.

AMBLYPTERUS Agassiz. Type *A. latus* Agassiz.

Agassiz, L. 1843 B (1833), ii, pp. 3, 28.

1844 A.

Eichwald, E. 1860 A, p. 1587.

Fritsch, A. 1895 A, p. 94.

Martin, K. 1873 A, p. 720.

Miller, S. A. 1889 A, p. 587.

Pictet, F. J. 1854 A, p. 181.

Quenstedt, F. A. 1852 A, p. 225.

1885 A, p. 345.

Steinmann and Döderlein 1890 A, p. 566.

Traquair, R. H. 1867 A.

1877 A.

Traquair, R. H. 1877 B.

Woodward, A. S. 1891 A, p. 437.

Zittel, K. A. 1890 A, pp. 189, 192.

Amblypterus carolinæ nom. nov.

Cope, E. D. 1875 V, p. 30. (*A. ornatus*.)

Emmons, E. 1857 A, p. 44, fig. 16. (*A. ornatus*,
not of Giebel.)

1860 A, p. 183, fig. 1611-3. (*A. ornatus*.)

Woodward, A. S. 1891 A, p. 448. (*A. ornatus*.)

Triassic; North Carolina.

HAPLOLEPIS S. A. Miller. Type *E. corrugata* (Newb.).

- Miller, S. A.* 1892 A, p. 715.
Hay, O. P. 1899 E, p. 791.
Miller, S. A. 1889 A, p. 597 (Eurylepis); p. 602 (Mecolepis).
Newberry, J. S. 1856 B, p. 96. (Mecolepis, preoccupied.)
 1857 B, p. 150. (Eurylepis, preoccupied.)
 1857 B. (Eurylepis.)
 1868 A, p. 144. (Eurylepis.)
 1873 A, p. 347. (Eurylepis.)
 1889 A, p. 212. (Eurylepis.)
Traquair, R. H. 1894 B, p. 373. (Eurylepis.)
Woodward, A. S. 1891 A, p. 448. (Eurylepis.)
Zittel, K. A. 1891 A, p. 192. (Eurylepis.)

Haplolepis corrugata (Newb.).

- Newberry, J. S.* 1856 B, p. 96. (Mecolepis.)
Miller, S. A. 1892 A, p. 715.
Newberry, J. S. 1857 B. (Eurylepis.)
 1873 A, pp. 138, 350, pl. xxxviii, figs. 4, 4a. (Eurylepis.)
Woodward, A. S. 1891 A, p. 450. (Eurylepis.)
 Coal-measures; Ohio.

Haplolepis granulata (Newb.).

- Newberry, J. S.* 1856 B, p. 97. (Mecolepis granulatus, *M. insculptus*.)
Miller, S. A. 1892 A, p. 715.
Newberry, J. S. 1857 B, p. 150. (Eurylepis granulatus, *E. insculptus*.)
 1873 A, p. 352, pl. xxxix, figs. 2-2a, (Eurylepis insculpta.); figs. 5-5a (Eurylepis granulata).
Woodward, A. S. 1891 A, p. 449.
 Coal-measures; Ohio.

Haplolepis minima (Newb.).

- Newberry, J. S.* 1873 A, p. 353, pl. xxxix, fig. 3. (Eurylepis.)
Miller, S. A. 1892 A, p. 715.
Woodward, A. S. 1891 A, p. 450. (Eurylepis.)
 Coal-measures; Ohio.

CHEIROLEPIS Agassiz. Type *C. traillii* Agassiz.

- Agassiz, L.* 1843 B (1835), pt. ii, p. 128.
 1844 B, p. 44.
Eichwald, E. 1860 A, p. 1573.
Huxley, T. H. 1861 B, p. 39.
McCoy, F. 1855 A, p. 580. (Chirolepis.)
Miller, S. A. 1889 A, p. 589. (Chirolepis.)
Nicholson and Lydekker 1889 A, p. 977.
Pander, C. H. 1860 A, p. 69.
Pictet, F. J. 1854 A, p. 190.
Powrie, J. 1867 A.
Reis, O. M. 1896 A, p. 187.
Traquair 1875 A.
 1888 B, p. 516.
Woodward, A. S. 1891 A, p. 451.

Haplolepis ornatissima (Newb.).

- Newberry, J. S.* 1856 B, p. 97. (Mecolepis.)
Miller, S. A. 1892 A, p. 715.
Newberry, J. S. 1857 B, p. 150. (Eurylepis.)
 1873 A, p. 352, pl. xxxix, figs. 4, 4a. (Eurylepis.)
Woodward, A. S. 1891 A, p. 450. (Eurylepis.)
 Coal-measures; Ohio.

Haplolepis ovoidea (Newb.).

- Newberry, J. S.* 1856 B, p. 97. (Mecolepis.)
Miller, S. A. 1892 A, p. 715.
Newberry, J. S. 1857 B, p. 150. (Eurylepis.)
 1873 A, p. 351, pl. xxxix, fig. 1. (Eurylepis.)
Woodward, A. S. 1891 A, p. 450. (Eurylepis.)
 Coal-measures; Ohio.

Haplolepis serrata (Newb.).

- Newberry, J. S.* 1856 B, p. 97. (Mecolepis.)
Miller, S. A. 1892 A, p. 715.
Newberry, J. S. 1857 B, p. 150. (Eurylepis.)
Woodward, A. S. 1891 A, p. 450. (Eurylepis.)
 Coal-measures; Ohio.

Haplolepis striolata (Newb.).

- Newberry, J. S.* 1873 A, p. 355. (Eurylepis.)
Miller, S. A. 1892 A, p. 715.
Woodward, A. S. 1891 A, p. 450. (Eurylepis.)
 Coal-measures; Ohio.

Haplolepis tuberculata (Newb.).

- Newberry, J. S.* 1856 B, p. 96. (Mecolepis.)
Miller, S. A. 1889 A, p. 597, fig. 1130. (Eurylepis.)
 1892 A, p. 715.
Newberry, J. S. 1857 B, p. 150. (Eurylepis.)
 1873 A, p. 350, pl. xxxviii, figs. 2-3a. (Eurylepis.)
Woodward, A. S. 1891 A, p. 449. (Eurylepis.)
 Coal-measures; Ohio.

- Woodward and Sherborn* 1890 A, p. 31.
Zittel, K. A. 1890 A, p. 188.

Cheirolepis canadensis Whiteaves.

- Whiteaves, J. F.* 1881 C, p. 33.
Cope, E. D. 1881 L, p. 253. (*C. cummingæ*?)
Dana, J. D. 1896 A, p. 618, fig. 974.
Traquair, R. H. 1890 A, p. 20.
Whiteaves, J. F. 1881 A, p. 496.
 1883 A, p. 355.
 1883 D, p. 33.
 1889 A, p. 90.
Woodward, A. S. 1891 A, p. 457.
 Upper Devonian; Province of Quebec.

RHADINICHTHYS Traquair. Type *R. ornatissimus* Agassiz.

Traquair, R. H. 1877 A, p. 558.

Collinge, W. E. 1893 A, p. 7.

Traquair, R. H. 1881 A, p. 25.

Ward, J. 1890 A, p. 175.

Wellburn, E. D. 1900 B, p. 260.

Woodward, A. S. 1891 A, p. 461.

Zittel, K. A. 1890 A, p. 193.

Rhadinichthys alberti (Jackson).

Jackson, C. T. 1851 B, p. 22, pl. i, fig. 1. (Palæoniscus.)

Dawson, J. W. 1868 A, p. 231, fig. 62. (Palæoniscus alberti?)

1877 A, p. 338.

1878 A, supplement, p. 100. (Palæoniscus.)

Egerton, P. G. 1853 A. (Palæoniscus.)

Jackson, C. T. 1851 A, p. 138. (Palæoniscus.)

Lesley, J. P. 1889 A, p. 584, figure. (Palæoniscus.)

Miller, S. A. 1889 A, p. 611, fig. 1172.

Newberry, J. S. 1889 A, p. 187. (Palæoniscus.)

Traquair, R. H. 1877 A, p. 559.

Woodward, A. S. 1891 A, p. 465.

Subcarboniferous; New Brunswick.

Rhadinichthys cairnsii (Jackson).

Jackson, C. T. 1851 B, p. 23, pl. i, fig. 3. (Palæoniscus.)

Dawson, J. W. 1877 A, p. 339.

1878 A, supplement, p. 100. (Palæoniscus.)

Egerton, P. G. 1853 A. (Palæoniscus.)

Jackson, C. T. 1851 A, p. 139. (Palæoniscus.)

Newberry, J. S. 1889 A, p. 187. (Palæoniscus.)

Woodward, A. S. 1891 A, p. 465.

Subcarboniferous; New Brunswick.

Rhadinichthys gracilis (Newb. and Worth).

Newberry and Worthen 1870 A, p. 347, pl. iii, fig. 4. (Palæoniscus.)

Woodward, A. S. 1891 A, p. 469.

Coal-measures; Illinois.

Rhadinichthys leidyanus (Lea).

Lea, I. 1853 B, p. 206, pl. xx, figs. 4, 5. (Palæoniscus.)

Amer. Jour. Science 1852 B.

Woodward, A. S. 1891 A, p. 469.

Coal-measures; Pennsylvania.

Rhadinichthys? lineatus (Newb.).

Newberry, J. S. 1856 B, p. 97. (Mecolepis.)

1857 B. (Eurylepis.)

1873 A, p. 353, pl. xxxix, figs. 7, 7a. (Eurylepis.)

1889 A, p. 228. (Rhadinichthys?.)

Woodward, A. S. 1891 A, p. 450. (Eurylepis?.)

Coal-measures; Ohio.

Rhadinichthys modulus (Dawson).

Dawson, J. W. 1877 A, p. 337, fig. 1. [Palæoniscus (Rhadinichthys).]

1878 A, supplement, p. 99, fig. 18. [P. (Rhadinichthys).]

Newberry, J. S. 1889 A, p. 187. (Palæoniscus.)

Woodward, A. S. 1891 A, p. 466.

Subcarboniferous; New Brunswick.

PYGOPTERUS Agassiz. Type *P. humboldti* Agassiz.

Agassiz, L. 1843 B (1833), ii, pt. i, p. 10; ii, pt. ii, pp. 74, 152 (1844).

1844 A.

Barkas, W. J. 1878 C, pp. 205, 207.

McCoy, F. 1855 A, p. 608.

Martin, K. 1873 A, p. 722.

Miller, S. A. 1889 A, p. 611.

Pictet, F. J. 1854 A, p. 179.

Quenstedt, F. A. 1852 A, p. 226.

1885 A, p. 347.

Traquair, R. H. 1867 A.

1875 B.

1877 A.

Woodward, A. S. 1891 A, p. 470.

Zittel, K. A. 1890 A, p. 194.

Pygopterus humboldti¹ Agassiz.

Agassiz, L. 1843 B, ii, pt. i (1833), p. 10 (P. humboldti); pt. ii (1844), p. 74, pls. liv, lv (P. humboldti); p. 76, pls. liii, liiia (P. mandibularis).

Lea, I. 1856 C, p. 78. (P. mandibularis.)

Miller, S. A. 1889 A, p. 611, fig. 1171. (P. mandibularis.)

Wheatley, C. M. 1861 A, p. 44. (P. mandibularis.)

Woodward, A. S. 1891 A, p. 470.

Permian; Europe; Triassic; Pennsylvania?

PALÆONISCUM Blainv. Type *P. freieslebeni* Blainv.

Blainville, H. M. D., 1818, *Nouv. Dict. d' Hist. Nat.*, vol. xxvii, p. 320.

The following authorities, unless otherwise indicated, call this genus *Palæoniscus*. The original form was *Palæoniscum*.

Agassiz, L. 1843 (1833) B, ii, pt. i, pp. 4, 41.

1844 A.

1851 B.

Barkas, W. J. 1878 C, p. 207.

Egerton, P. G. 1849 B, p. 4.

Eichwald, E. 1860 A, p. 1581.

Hancock and Atthey 1868 A, p. 358, pl. xv, figs. 3-5; pl. xvi, figs. 1, 2.

Koninck, L. G. de 1844 A, p. 608. (Palæoniscum.)

Kosmak, G. W. 1895 A, p. 20.

McCoy, F. 1855 A, p. 605.

Martin, K. 1873 A, p. 700, pl. xxii.

Miller, S. A. 1889 A, p. 604.

¹ This species, under the name *P. mandibularis*, was reported with doubt by Lea from the Triassic of Pennsylvania. The scales there found probably belong to some other species.

- Newberry, J. S. 1873 A, p. 344.
 Nicholson and Lydekker 1889 A, p. 977.
 Owen, R. 1845 B, p. 69.
 Pictet, F. J. 1854 A, p. 184.
 Quenstedt, F. A. 1852 A, p. 223.
 1885 A, p. 343.
 Redfield, W. C. 1841 A, p. 25.
 1856 A, p. 36.
 Rohon, J. V. 1889 A, p. 10.
 Steinmann and Döderlein 1890 A, p. 566.
 Traquair, R. H. 1877 A
 Williamson, W. C. 1849 A, p. 445, pl. xl, fig. 7; pl.
 xli, fig. 1.
 Woodward, A. S. 1891 A, p. 476.
 Zittel, K. A. 1890 A, p. 190.

Palæoniscum antiquum Williams.

Williams, H. U. 1886 A, p. 84, fig. 2.

Woodward, A. S. 1891 A, p. 485.
 Devonian (Portage); New York.

Palæoniscum devonicum Clarke.

Clarke, J. M. 1885 A, pp. 20, 41, pl. i, figs. 2-6.
 Lesley, J. P. 1889 A, p. 585, figures.
 Woodward, A. S. 1891 A, p. 485.
 Devonian (Genesee); New York.

Palæoniscum reticulatum Williams.

Williams, H. U. 1886 A, p. 86, fig. 1.
 Woodward, A. S. 1891 A, p. 485.
 Devonian (Portage); New York.

Palæoniscum scutigerum Newb.

Newberry, J. S. 1868 A, p. 145. (No description.)
 Hitchcock, C. H. 1868 B, p. 186. (No description.)
 Coal-measures; Ohio.

TEGEOLEPIS S. A. Miller. Type *Actinophorus clarkii* Newb.

- Miller, S. A. 1892 A, p. 717.
 Claypole, E. W. 1895 F. (Actinophorus.)
 Hay, O. P. 1899 E, p. 791.
 Newberry, J. S. 1888 D, p. 179. (Actinophorus, type
 A. clarkii; preoccupied.)
 1889 A, p. 174. (Actinophorus.)
 Woodward, A. S. 1891 A, p. 486. (Actinophorus.)

Tegeolepis clarkii (Newb.).

Newberry, J. S. 1888 D, p. 179. (Actinophorus.)
 Claypole, E. W. 1895 F. (Actinophorus.)
 Newberry, J. S. 1889 A, p. 175, pl. xlix, fig. 1. (Ac-
 tinophorus.)
 Woodward, A. S. 1891 A, p. 487. (Actinophorus.)
 Devonian (Cleveland shale); Ohio.

ELONICHTHYS Giebel. Type *E. germari* Giebel.

- Giebel, C. G. 1848 A, p. 249.
 Traquair, R. H. 1877 A, p. 553. (Cosmoptychius.)
 1877 B, p. 42 (Cosmoptychius); p. 47 (Elon-
 ichthys).
 Ward, J. 1890 A, p. 171.
 Woodward, A. S. 1891 A, p. 487.
 Woodward and Sherborn 1890 A, p. 48 (Cosmo-
 ptychius); p. 73 (Elonichthys).
 Zittel, K. A. 1890 A, p. 190.

Elonichthys browni (Jackson).

- Jackson, C. T. 1851 B, p. 22, pl. i, fig. 2. (Palæo-
 niscus.)
 Dawson, J. W. 1877 A, p. 339. [Palæoniscus (Elon-
 ichthys) brownii.]
 1878 A, supplement p. 101. [Palæoniscus
 (Elonichthys) brownii.]
 Jackson, C. T. 1851 A, p. 139. (Palæoniscus.)
 Newberry, J. S. 1889 A, p. 187.
 Traquair, R. H. 1877 A, p. 553. (Elonichthys.)
 Woodward, A. S. 1891 A, p. 501.
 Subcarboniferous; New Brunswick.

Elonichthys elegans (Emmons).

- Emmons, E. 1860 A, p. 191, fig. 167¹ 2. (Rabdio-
 lepis.)
 Leidy, J. 1876 B. (Rhabdolepis elegans?)
 1876 D. (Rabdiolepis elegans?)
 Mesozoic; N. Carolina, Pennsylvania.

Elonichthys hypsilepis Hay.

Hay, O. P. 1900 A, p. 117 (E. peltigerus?); p. 120
 (E. hypsilepis); pl. vii (E. peltigerus hypsilepis).
 Coal-measures; Illinois.

Elonichthys macropterus (Agassiz).

Agassiz, L. 1843 B (1833), ii, pt. i, pp. 4, 31; pl.
 i, figs. 4-7; pl. iii, figs. 1-4. (Amblypterus.)
 Goldfuss, A. 1847 A, p. 20, pl. v, figs. 1-8. (Am-
 blypterus.)
 Hay, O. P. 1900 A, p. 120. (Syn.? of E. hypsilepis.)
 ?Newberry and Worthen 1870 A, p. 348. (Ambly-
 pterus.)
 Traquair, R. H. 1877 A, p. 552.
 1877 B, pl. ii, fig. 6. (Rhabdolepis.)
 Woodward, A. S. 1891 A, p. 491.
 Coal-measures; Europe, Illinois?

Elonichthys peltigerus Newb.

Newberry, J. S. 1856 B, p. 98.
 Hay, O. P. 1900 A, p. 117.
 Lesley, J. P. 1889 A, p. 585, figure. (Palæoniscus.)
 1895 A, pl. dlxx. (Palæoniscus.)
 Miller, S. A. 1889 A, p. 605, fig. 1155. (Palæoniscus.)
 Newberry, J. S. 1873 A, p. 345, pl. xxxviii, figs. 1-1b.
 Newberry and Worthen 1866 A, p. 17, fig. 1. (Pa-
 læoniscus.)
 Traquair, R. H. 1877 A, p. 553.
 1877 B, p. 47.
 Woodward, A. S. 1891 A, p. 489.
 Coal-measures; Ohio, Illinois, Indiana.

ACROLEPIS Agassiz. Type *A. sedgwicki* Agassiz.

Agassiz, L. 1843 B, ii, pt. i, p. 11 (1833); ii, pt. ii, p. 79 (1844).

1844 A.

Barkas, W. J. 1878 C, p. 207.

Eichwald, E. 1860 A, p. 1577.

Fritsch, A. 1895 A, p. 115.

McCoy, F. 1855 A, p. 609.

Martin, K. 1873 A, p. 717.

Miller, S. A. 1889 A, p. 587.

Pictet, F. J. 1854 A, p. 180.

Quenstedt, F. A. 1852 A, p. 226.

1885 A, p. 346.

Woodward, A. S. 1891 A, p. 501.

Zittel, K. A. 1890 A, p. 191.

Acrolepis ? hortonensis Dawson.

Dawson, J. W. 1868 A, p. 254, fig. 77 *e, f*.

1877 A, p. 339. (*Palæoniscus jacksoni*.)

1878 A, p. 255, fig. 77 *e, f*. (*A. ? hortonensis*); supplement, p. 101 (*Palæoniscus jacksoni*).

Newberry, J. S. 1889 A, p. 187.

Woodward, A. S. 1891 A, p. 508.

Subcarboniferous; New Brunswick.

PLATYSOMIDÆ.

Young, J. 1866 A, p. 316.

Bridge, W. J. 1879 A, p. 723.

Cope, E. D. 1880 P.

1891 E.

Günther, A. 1880 A, p. 370.

1881 A, p. 687.

Nicholson and Lydekker 1889 A, p. 979.

Steinmann and Döderlein 1890 A, p. 567.

Traquair, R. H. 1879 A.

1891 A, p. 129.

1896 A, p. 125.

Woodward, A. S. 1891 A, p. 527. (*Platysomatidæ*.)

1898 B, p. 87.

Zittel, K. A. 1890 A, p. 197.

CHIRODUS McCoy. Type *C. pes-ranæ* McCoy.

McCoy, F. 1848 A, p. 130.

Davis, J. W., 1884, Quart. Jour. Geol. Soc., xl, p. 620. (*Hemicladodus*.)

Miller, S. A. 1889 A, p. 589.

Pictet, F. J. 1854 A, p. 268.

Rohon, J. V. 1898 A.

Traquair, R. H. 1878 A, p. 15. (*Cheirodus*.)

Ward, J. 1890 A, p. 183.

Woodward, A. S. 1891 A, p. 535. (*Cheirodus*.)

Woodward and Sherborn 1890 A, p. 30. (*Cheirodus*.)

Young, J. 1866 A, p. 306. (*Amphicentrum*.)

Zittel, K. A. 1890 A, p. 199. (*Cheirodus*.)

Chirodus acutus Newb.

Newberry, J. S. 1856 B, p. 99. (*Cheirodus*.)

Miller, S. A. 1889 A, p. 589.

Woodward, A. S. 1891 A, p. 540. (*Cheirodus*.)

Coal-measures; Ohio.

PLATYSOMUS Agassiz. Type *P. gibbosus* Agassiz.

Agassiz, L. 1843 B (1835), ii, pt. i, pp. 6, 161.

1844 A.

Collinge, W. E. 1893 A, p. 9.

Egerton, P. G. 1849 A.

Heckel, J. J. 1850 A, p. 365.

King, W. 1850 A, p. 228.

Koninck, L. G. de 1878 A, p. 24.

McCoy, F. 1855 A, p. 614.

Miller, S. A. 1889 A, p. 607.

Newberry, J. S. 1873 A, p. 258.

Nicholson and Lydekker 1889 A, p. 980.

Quenstedt, F. A. 1852 A, p. 227.

1885 A, p. 347.

Pictet, F. J. 1854 A, p. 208.

Steinmann and Döderlein 1890 A, p. 567.

Traquair, R. H. 1879 A.

Woodward, A. S. 1891 A, p. 541.

Young, J. 1866 A, p. 302.

Zittel, K. A. 1890 A, p. 200.

Platysomus circularis Newb. and Worth.

Newberry and Worthen 1870 A, p. 347, pl. iv, fig. 2.

Woodward, A. S. 1891 A, p. 550.

Coal-measures; Illinois.

Platysomus lacovianus Cope.

Cope, E. D. 1891 B, p. 462, pl. xxxi, fig. 11.

Coal-measures; Illinois.

Platysomus orbicularis Newb. and Worth.

Newberry and Worthen 1870 A, pl. iii, fig. 1. (No description.)

Woodward, A. S. 1891 A, p. 550.

Coal-measures; Illinois.

Platysomus palmaris Cope.

Cope, E. D. 1891 B, p. 460, pl. xxxiii, fig. 10.

Permian; Indian Territory.

TURSEODUS Leidy. Type *T. acutus* Leidy.

Leidy, J. 1857 F, p. 167.

Turseodus acutus Leidy.

Leidy, J. 1857 F, p. 167.

Wheatley, C. M. 1861 A, p. 44.

Woodward, A. S. 1891 A, p. 527.

Triassic?; Pennsylvania.

DICTYOPYGIDÆ.

Hay, O. P. 1899 E, p. 789.

Woodward, A. S. 1890 C, p. 1. (Catopteridæ.)

1890 D, p. 15. (Catopteridæ.)

Woodward, A. S. 1895 A, pp. vii, 1. (Catopteridæ.)

1898 B, p. 87. (Catopteridæ.)

Zittel, K. A. 1890 A, p. 202. (Stylodontidæ, in part.)

Redfieldius Hay. Type *Catopterus gracilis* Redfield.

Hay, O. P. 1839 E, p. 789.

The following authors refer to this genus as *Catopterus*. This name is, however, preoccupied through Agassiz's use of it for what is now called *Dipterus*.

Egerton, P. G. 1849 B, p. 8.

1853 B, p. 277.

Newberry, J. S. 1888 A, p. 50.

Nicholson and Lydekker 1889 A, p. 983.

Pictet, F. J. 1854 A, p. 187.

Redfield, J. H. 1837 A, p. 39. (Catopterus, type

C. gracilis; not Catopterus of Agassiz, 1833.)

Redfield, W. C. 1841 A, p. 26.

1856 A.

1857 A.

Traquair, R. H. 1877 A, p. 562.

Woodward, A. S. 1890 D, p. 15.

1895 A, pp. vii, 1.

1898 B, p. 88.

Zittel, K. A. 1890 A, p. 203.

Redfieldius anguilliformis (W. C. Redfield).

Redfield, W. C. 1841 A, p. 27. (Catopterus.)

De Kay, J. E. 1842 B, p. 386. (Catopterus.)

Egerton, P. G. 1849 B, p. 10. (Catopterus.)

Hay, O. P. 1899 E, p. 789. (Redfieldius.)

Newberry, J. H. 1888 A, p. 59, pl. xviii, fig. 5. (Catopterus.)

Woodward, A. S. 1895 A, p. 3. (Catopterus.)

Triassic; Connecticut, New Jersey.

Redfieldius gracilis (J. H. Redfield).

Redfield, J. H. 1837 A, p. 39, pl. 1. (Catopterus.)

The following authors, unless otherwise noted, put this species in *Catopterus* Redfield.

"D. L. H." 1838 A, p. 199.

Dana, J. D. 1896 A, p. 751, fig. 1170.

Davis, C. H. S. 1887 A.

De Kay, J. E. 1842 B, p. 386.

Egerton, P. G. 1849 B, p. 10.

Hay, O. P. 1899 E, p. 789. (Redfieldius.)

Hills, R. C. 1880 A.

Hitchcock, E. 1841 A, pp. 440, 460.

Newberry, J. S. 1888 A, p. 55, pl. xvi, figs. 1-3.

Redfield, W. C. 1838 B.

1839 A.

1841 A, p. 27.

1857 A.

Wheatley, C. M. 1861 A, p. 44.

Woodward, A. S. 1895 A, p. 2.

Triassic; Connecticut, Massachusetts, New Jersey.

Redfieldius minor (Newb.).

Newberry, J. S. 1888 A, p. 57, pl. xvii, figs. 1-4. (Catopterus.)

Hay, O. P. 1899 E, p. 789.

Woodward, A. S. 1895 A, p. 3. (Catopterus.)

Triassic; Connecticut.

Redfieldius ornatus (Newb.).

Newberry, J. S. 1888 A, p. 58, pl. xviii, figs. 3-3b. (Catopterus.)

Hay, O. P. 1899 E, p. 789.

Woodward, A. S. 1895 A, p. 3. (Catopterus.)

Triassic; Connecticut.

Redfieldius parvulus (W. C. Redfield.).

Redfield, W. C. 1841 A, p. 28. (Catopterus.)

De Kay, J. E. 1842 B, p. 386. (Catopterus.)

Egerton, P. G. 1849 B, p. 10. (Catopterus.)

Hay, O. P. 1899 E, p. 789.

Newberry, J. S. 1888 A, p. 60, pl. xvi, figs. 4, 5. (Catopterus.)

Woodward, A. S. 1895 A, p. 2. (Catopterus.)

Triassic; Connecticut.

Redfieldius redfieldi (Egerton.).

Egerton, P. G., in Lyell, C. 1847 B, p. 278. (Catopterus.)

1849 B, p. 8. (Catopterus.)

Hay, O. P. 1899 E, p. 789.

Newberry, J. S. 1888 A, p. 53, pl. xv, figs. 1-3. (Catopterus.)

Woodward, A. S. 1895 A, p. 3. (Catopterus.)

Triassic; Connecticut, New Jersey.

DICTYOPYGE Egerton. Type *D. macrura* Redfield.

Egerton, P. G., in Lyell, C. 1847 B, p. 276.

1849 B, p. 8.

1853 B, p. 277.

Emmons, E. 1856 A, p. 52.

Newberry, J. S. 1888 A, p. 61.

Redfield, W. C. 1856 A, p. 361.

Strüver, J. 1864 A, p. 322.

Traquair, R. H. 1877 A, p. 563.

Woodward, A. S. 1890 D, p. 16.

1895 A, p. 4.

Woodward, A. S. 1898 B, p. 88.

Zittel, K. A. 1890 A, p. 203.

Dictyopyge macrura (W. C. Redfield.).

Redfield, W. C. 1841 A, p. 27. (Catopterus.)

De Kay, J. E. 1842 B, p. 386. (Catopterus.)

Egerton, P. G., in Lyell, C. 1847 B, p. 275, pl. viii; pl. ix, fig. 1.

Emmons, E. 1857 A, p. 52, pl. ix, figs. 1, 2. (Catopterus.)

Newberry, J. S. 1888 A, p. 64, pl. xviii, figs. 1, 2.
 Redfield, W. C. 1841 A, p. 27. (Catopterus.)
 1856 A, p. 361. (Catopterus.)
 1857 A, p. 185. (Catopterus.)

Woodward, A. S. 1890 D, p. 16.
 1895 A, p. 4, fig. 1.
 Triassic; Virginia.

ACIPENSERIDÆ.

Agassiz, L. 1843 B (1844), ii, pt. ii, p. 277. ("Accipenserides.")
 Bridge, W. J. 1879 A.
 1896 A, p. 534.
 Brühl, B. C. 1847 A.
 Cope, E. D. 1872 C, p. 320.
 Davis, J. W. 1877 B.
 Egerton, P. G. 1859 B.
 Gegenbaur, C. 1898 A.
 Göldi, E. A. 1883 A.
 1884 A.
 Goette, A. 1878 A, p. 442.
 Günther, A. 1870 A, p. 332.
 1880 A, p. 360.
 1881 A, p. 687.
 Hertwig, O. 1876 A, p. 373.

Iwanzow, N. 1887 A. (Scaphorhynchus.)
 Jordan and Evermann 1896 A, p. 102.
 Klaatsch, H. 1890 A, p. 146.
 Kölliker, A. 1859 A. (Acipenserini.)
 Köstlin, O. 1844 A, p. 402. ("Stör.")
 Kosmak, G. W. 1895 A, p. 11.
 Müller, J. 1835 A.
 Newberry, J. S. 1873 A, p. 256.
 Parker, W. K. 1882 B.
 Pollard, H. B. 1892 A.
 Stannius, H. 1854 A.
 Thacher, J. K. 1877 A.
 1877 B.
 Woodward, A. S. 1889 H.
 1895 A, p. 42.
 Zittel, K. A. 1890 A, p. 163.

ACIPENSER Linn. Type *A. sturio* Linn.

Linnaeus, C., 1758, Syst. Nat., ed. x, p. 237.
 Allis, E. P. 1900 A, p. 274.
 Bridge, W. J. 1879 A.
 Brühl, B. C. 1847 A.
 Dean, B. 1895 A.
 Gadow and Abbott 1895 A.
 Gegenbaur, C. 1865 B, p. 95, pl. vi, fig. 1; pl. viii, figs. 2, 3.
 1895 A, fig. 1.
 1898 A.
 Goette, A. 1878 A, p. 442.
 Günther, A. 1880 A, p. 361.
 Hay, O. P. 1895 A.
 Huxley, T. H. 1872 A, p. 121.
 Iwanzow, N. 1887 A. (On Scaphorhynchus.)
 Jordan and Evermann 1896 A, p. 103.
 Kittary, M. 1850 A, p. 389, pls. vi, vii.
 Kölliker, A. 1860 B.
 Köstlin, O. 1844 A.
 Kosmak, G. W. 1895 A, p. 1, pls. xlvii-xlviii.
 Maggi, L. 1898 E, fig. 21.

Metschnikoff, O. 1879 A, pl. xxiv, figs. 1-7.
 Owen, R. 1866 A.
 Parker, W. K. 1868 A.
 1882 B.
 Salensky, W. 1899 A, p. 178.
 Stannius, H. 1854 A.
 Stephan, P. 1900 A.
 Thacher, J. K. 1877 B, pl. i, figs. 1, 2.
 Van Wijhe, J. W. 1882 A, p. 220.
 Williamson, W. C. 1849 A, p. 448, pl. lxi, fig. 11.
 Woodward, A. S. 1889 H.
 1895 A, p. 43.
 Zograf, N. 1896 A.

Acipenser ornatus Leidy.

Leidy, J. 1873 C.
 1873 A, p. 312.
 1873 B, p. 350, pl. xxxii, fig. 58.
 Woodward, A. S. 1895 A, p. 45.
 Miocene; Virginia.

POLYODONTIDÆ.

Bridge, W. J. 1879 A.
 1896 A, p. 536.
 Browne, M. 1886 A. (Chondrosteus.)
 Brühl, B. C. 1847 A. ("Spatularien.")
 Collinge, W. E. 1895 A.
 Gegenbaur, C. 1865 B, p. 99, pl. viii, fig. 4. (Polyodon.)
 1898 A.
 Günther, A. 1870 A, p. 346.
 1880 A, p. 362.
 Huxley, T. H. 1872 A, p. 122.
 Jordan and Evermann 1896 A, p. 101.

Mivart, St. G. 1879 A, p. 471.
 Müller, J. 1835 A. (Spatularia.)
 Parker, W. K. 1871 A, p. 195.
 Thacher, J. K. 1877 B.
 Traquair, R. H. 1877 B.
 1887 A. (Chondrosteus.)
 Van Wijhe, J. W. 1882 A, p. 240.
 Woodward, A. S. 1889 H.
 1895 A, pp. vii, 46.
 1899 B, p. 461. (Gyrosteus.)
 Zittel, K. A. 1890 A, p. 164.

CROSSOPHOLIS Cope. Type *C. magnicaudatus* Cope.

- Cope, E. D. 1883 G G. (*Crassopholis, errore.*)
 1885 Y, p. 1090.
 1886 T, p. 161.
 1887 S, p. 325.
 Woodward, A. S. 1889 H, p. 29.
 1895 A, p. 46.
 1898 B, p. 94.
 Zittel, K. A. 1890 A, p. 165.

Crossopholis magnicaudatus Cope.

- Cope, E. D. 1883 GG.
 1885 Y, p. 1090.
 1886 T, p. 161, pl. i, figs. 1-3.
 Woodward, A. S. 1895 A, p. 47.
 Eocene; Wyoming.

Order PYCNODONTI.

- Agassiz, L. 1843 B, ii, pt. ii, p. 181. ("Pycnodontes.")
 Cornuel, J. 1877 A, p. 609. ("Pycnodontes.")
 Davis, J. W. 1887 C, p. 495. (Pycnodontoidea.)
 Didelot, L. 1875 A. ("Pycnodontes.")
 Egerton, P. G. 1849 A.
 1869 A, p. 381.
 Fricke, K. 1875 A.
 Günther, A. 1880 A, p. 366. (Pycnodontoidei.)
 Heckel, J. J. 1850 A. ("Pycnodonten.")
 1854 A. ("Pycnodonten.")
 1856 A. ("Pycnodonten.")
 Huxley, T. H. 1876 B, xiii, p. 411. (Pycnodonta.)
 Lütken, C. 1868 B. (Lepidopleuridæ.)
 1873 A, pp. 30, 45. (Pycnodontes.)
 Owen, R. 1845 B, p. 70. ("Pycnodonts.")
 1860 E, p. 160. (Pycnodontes.)
 Pictet, F. J. 1854 A, p. 194. (Pycnodontes.)
 Pictet and Jaccard 1860 A, p. 42. (Pycnodontes.)
 Quenstedt, F. A. 1852 A, p. 209. ("Pleurolepididen.")
 1885 A, p. 325. ("Pleurolepiden.")
 Wagner, A. 1861 B, p. 49. (Pycnodontes.)
 Young, 1866 A, p. 315. (Lepidopleuridæ, part.)
 Zittel, K. A. 1890 A, p. 237. (Pycnodontidæ.)

PYCNODONTIDÆ.

- Cope, E. D. 1877 N, p. 61.
 1878 A, pp. 297, 298.
 1885 Z, p. 7.
 Davis, J. W. 1887 C, p. 495.
 Günther, A. 1880 A, p. 366.
 1881 A, p. 687.
 Hancock and Howes 1872 A. ("Pycnodonts.")
 Hay, O. P. 1898 A, p. 358.
 1898 C, p. 347.
 Heckel, J. J. 1856 A.
 Huxley, T. H. 1872 A, p. 129.
 King, W. 1850 A, p. 227.
 Klaatsch, H. 1890 A, p. 149.
 Newberry, J. S. 1873 A, p. 258.
 Nicholson and Lydekker 1889 A, p. 983.
 Owen, R. 1845 B, p. 70. ("Pycnodonts.")
 1860 E, p. 140.
 Pictet, F. J. 1854 A, p. 194. (Pycnodontes.)
 Steinmann and Döderlein 1890 A, p. 543.
 Traquair, R. H. 1879 A, p. 380. (Pycnodontidæ.)
 1896 A, p. 125.
 Woodward, A. S. 1895 A, pp. xi, 189.
 1896 C, p. 1.
 1898 B, p. 101.
 Young, J. 1866 A.
 Zittel, K. A. 1890 A, p. 236.
 1896 A, p. 411.

TYPODUS Quenstedt. Type *T. annulatus* Quenstedt.

- Quenstedt, F. A., 1858, Der Jura, p. 781.
 Egerton, P. G. 1869 A, p. 582. (Mesodon.)
 Hay, O. P. 1899 E, p. 789.
 Heckel, J. J. 1850 A, p. 365. (Mesodon.)
 1856 A, 202. (Mesodon.)
 Pictet, F. J. 1854 A, p. 203. (Mesodon.)
 Pictet and Jaccard 1860 A, p. 45. (Mesodon.)
 Quenstedt, F. A. 1852 A, p. 330. (Mesodon.)
 Wagner, A. 1851 A, p. 56. (Mesodon; type *Gyrodus macropterus* Agassiz.)
 1861 B, p. 69.
 Woodward, A. S. 1895 A, p. 199. (Mesodon.)
 1896 C, p. 13. (Mesodon.)
 1898 B, p. 104. (Mesodon.)
 Zittel, K. A. 1890 A, p. 247. (Mesodon.)
 The name *Mesodon* was employed by Rafinesque for a mollusk in 1819. According to Mr. A. S. Woodward, *Typodus* is probably a synonym of *Mesodon*, and is here accepted provisionally as the name of this genus.
Typodus abrasus (Cragin).
Cragin, F. W. 1894 A, p. 72, pl. ii, figs. 18, 19. (Mesodon.)
 Hay, O. P. 1899 E, p. 789.
 Williston, S. W. 1900 A, p. 29. (Mesodon.)
 1900 B, p. 256. (Mesodon abrasus; *Lepidotus?* sp.)
 Woodward, A. S. 1895 A, p. 532. (Mesodon.)
 Cretaceous (Neocomian); Kansas.
Typodus diastematicus (Cope).
Cope, E. D. 1894 F, p. 443, fig. 5. (Mesodon.)
 Hay, O. P. 1899 E, p. 789.
 Woodward, A. S. 1895 A, p. 213. (Mesodon.)
 Cretaceous; Texas.

Typodus dumblei (Cope).

- Cope, *E. D.* 1892 J, p. 128. (Microdon.)
 1892 E, p. 256. (Microdon.)
 1894 F, p. 444, pl. xx, fig. 7. (Mesodon.)

Hay, O. P. 1899 E, p. 789.

Woodward, A. S. 1895 A, p. 213. (Mesodon.)
 Cretaceous; Texas.

Cœlodus Heckel. Type *C. saturnus* Heckel.

- Heckel, J. J. 1856 A, p. 202.
 Cope, E. D. 1894 F, p. 447.
 Davis, J. W. 1890 A, p. 415.
 Priem, F. 1898 A, p. 230.
 Quenstedt, F. A. 1885 A, p. 330.
 Vetter, B. 1881 A, p. 34.
 Woodward, A. S. 1895 A, p. 249.
 Woodward and Sherborn 1890 A, p. 41.
 Zittel, K. A. 1890 A, p. 248.

Williston, S. W. 1900 A, p. 28, pl. vi, fig. 12.
 1900 B, p. 254, pl. xxiv, fig. 12.

Woodward, A. S. 1895 A, p. 257.
 Cretaceous (Comanche); Oklahoma.

Cœlodus stantoni Williston.

Williston, S. W. 1900 A, p. 28, pl. vi, fig. 11; pl. viii, fig. 6.

1900 B, p. 255, pl. xxiv, fig. 11; pl. xxvi, fig. 6.

Cretaceous (Kiowa shales); Kansas.

Cœlodus brownii Cope.

- Cope, *E. D.* 1894 F, p. 447, pl. xx, fig. 10.
 1894 A, p. 66.

Pycnodus Agassiz. Type *Zeus platessus* Blainv.

Agassiz, L. 1843 B (1833), i, pl. G, fig. 1. (Name and figure only.)

1843 B, ii, pt. 1 (1833), p. 16; pt. ii (1844), p. 183 (Pycnodus); p. 201 (Periodus).
 1844 A.

Pycnodus carolinensis Emmons.

Emmons, E. 1858 B, p. 244, fig. 96.

Cope, E. D. 1875 V, p. 30.

Leidy, J. 1873 B, pp. 294, 350.

Woodward, A. S. 1895 A, p. 279.

Miocene; North Carolina.

Pycnodus phaseolus Hay.

Hay, O. P. 1899 E, p. 788.

Cope, E. D. 1875 E, p. 280. (P. faba.)

Leidy, J. 1872 M, p. 163. (P. faba; preoccupied by Meyer, 1847.)

1873 B, pp. 292, 349, pl. xix, figs. 15, 16. (P. faba.)

Woodward, A. S. 1895 A, p. 265. (P. faba.)

Cretaceous; Mississippi, New Jersey.

Pycnodus robustus Leidy.

Leidy, J. 1857 F, p. 168.

1873 B, pp. 293, 350, pl. xxxvii, figs. 18, 19.

Woodward, A. S. 1895 A, p. 266.

Cretaceous; New Jersey.

Pycnodus sp. indet.

Emmons E. 1857 A, p. 50, fig. 25.

Triassic (Chatham); North Carolina.

Hadrodus Leidy. Type *H. priscus* Leidy.

Leidy, J. 1857 F, p. 167.

1873 B, p. 294.

This genus was suspected by Leidy to be reptilian, allied to *Placodus*.

Hadrodus priscus Leidy.

Leidy, J. 1857 F, p. 167.

1873 B, pp. 294, 350, pl. xix, figs. 17-20.

Cretaceous; Mississippi.

Uranoplosus Sauvage. Type *U. cotteani* Sauvage.

Sauvage, H. E. 1879 A, p. 47, pl. i, fig. 1.

Cope, E. D. 1894 F, p. 445.

Uranoplosus arctatus Cope.

Cope, *E. D.* 1894 F, p. 445, pl. xx, fig. 8.

1894 A, p. 65. (No description.)

Cretaceous (Comanche); Oklahoma.

Uranoplosus flectidens Cope.

Cope, *E. D.* 1894 F, p. 446, pl. xx, fig. 9.

1894 A, p. 65. (No description.)

Cretaceous (Comanche); Oklahoma.

Order HOLOSTEI Müller.

Müller, J. 1846 C, pp. 147, 203.
 Gadow, H. 1898 A, p. 8.
 Giebel, C. G. 1847 A, p. 141.

Gill, T. 1872 C, p. 21. (Hyoganoidei.)
 Jordan and Evermann 1896 A, p. 107.

Suborder GINGLYMODI Cope.

Cope E. D. 1872 C, p. 328.
 Barkas, W. J. 1878 C, p. 203. (Lepidosteidae.)
 Cope, E. D., 1872 C, p. 330.
 1878 A, p. 295.
 1884 O, p. 52.
 1887 O, p. 1018.
 1889 R, p. 857.
 Gill, T. 1872 C, p. 21. (Rhomboganoidei.)
 Günther, A. 1881 A, p. 687. (Lepidosteidae.)
 Hay, O. P. 1898 C, p. 341. (No name.)
 Haeckel, E. 1895 A, p. 236. (Lepidostones.)
 Huxley, T. H. 1861 B, p. 28. (Lepidosteidae, as suborder.)

Jordan and Evermann 1896 A, p. 108. (Rhomboganoidea.)
 Lütken, C. 1873 A, pp. 23, 45. (Lepidosteini.)
 Nicholson and Lydekker 1889 A, p. 980. (Lepidosteidae.)
 Steinmann and Döderlein 1890 A, p. 569. (Euganoidei.)
 Traquair, R. H. 1896 A, p. 126. (Aëthespondyli.)
 Woodward, A. S. 1893 A, p. 413. (Lepidosteidae.)
 1895 A, pp. xxii, 415. (Aëthespondyli, in part.)
 1898 B, p. ii. (Aëthespondyli, in part.)
 Zittel, K. A. 1890 A, p. 201 (Lepidosteidae); p. 899 (Lepidostei).

LEPIDOTIDÆ.

Owen, R. 1860 E, p. 143.
 Cope, E. D. 1877 N, p. 60.
 1878 A, p. 298.
 1889 R, p. 858. (Sphærodontidæ, Lepidotidæ.)
 Günther, A. 1880 A, p. 368. (Sphærodontidæ.)
 Hay, O. P. 1898 A, p. 358. (Semionotidæ.)
 1898 C, p. 347. (Semionotidæ.)
 Nicholson and Lydekker 1889 A, p. 986.

Wagner A. 1863 A, p. 613 (Stylodontes); p. 617 (Sphærodontes).
 Williamson, W. C. 1849 A, p. 441. (Lepidotus.)
 Woodward, A. S. 1890 D, p. 30. (Semionotidæ.)
 1895 A, pp. ix, 49. (Semionotidæ.)
 1895 E, p. 8. (Semionotidæ.)
 1898 B, p. 95. (Semionotidæ.)
 Zittel, K. A. 1890 A, p. 202 (Stylodontidæ); p. 207 (Sphærodontidæ).

LEPIDOTUS Agassiz. Type *Cyprinus elvensis* Blainville.

Agassiz, L. 1843 B (1837), ii, pp. 8, 233.
 1844 A.
 Barkas, W. J. 1878 C, p. 205.
 Branco, W. 1887 A.
 Bronn, H. G. 1837 A, 485.
 Collinge, W. E. 1893 A, p. 9.
 Cornuel, J. 1877 A, p. 620.
 Egerton, P. G. 1852 A.
 1869 A, p. 385.
 Etheridge, R. 1889 A.
 Fricke, K. 1875 A, p. 377.
 Hay, O. P. 1898 C, p. 347.
 Heckel, J. J. 1850 A, p. 362.
 Kner, R. 1866 B, p. 313.
 Nicholson and Lydekker 1889 A, p. 986.
 Owen, R. 1845 B, p. 69, pls. 30, 31.

Pictet, F. J. 1854 A, p. 160.
 Pictet and Jaccard 1860 A, p. 26.
 Quenstedt, F. A. 1847 A, pls. i, ii.
 1852 A, p. 195.
 1885 A, p. 307.
 Wagner A. 1863 A, p. 618.
 Williamson, W. C. 1849 A, p. 441, pl. xl, figs. 3, 4.
 Woodward, A. S. 1893 A.
 1893 D, pls. xlix, l.
 1895 A, p. 77.
 1898 A, p. 325.
 Zittel, K. A. 1890 A, p. 208.

Lepidotus sp. indet.

Williston, S. W. 1900 A, p. 29.
 Cretaceous (Kiowa shales); Kansas.

ACENTROPHORUS Traquair. Type *A. varians* (Kirkby).

Traquair, R. H. 1877 A, p. 565.
 Fritsch, A. 1895 A, p. 81.
 Lütken, C. 1873 A, p. 26, footnote.
 Newberry, J. S. 1888 A, p. 67.
 Traquair, R. H. 1900 B, p. 523.
 Woodward, A. S. 1895 A, p. 51.
 Zittel, K. A. 1890 A, p. 203.

Acentrophorus *chicopensis* Newb.

Newberry, J. S. 1888 A, p. 69, pl. xix, figs. 3, 4.
 1887 A, p. 127. (No description).
 Woodward, A. S. 1895 A, p. 54.
 Triassic; New Jersey, Connecticut.

SEMIONOTUS Agassiz. Type *S. bergeri* Agassiz.

Agassiz, L., 1832, Neues Jahrb. Mineral., p. 144.

1843 B (1837), ii, pt. 1, pp. 8, 222.

Barkas, W. J. 1878 C, p. 205.

Bronn, H. G. 1837 A, p. 485, pl. xxiv, fig. 4.

Egerton, P. G., in *Lyell, C.* 1847 B. (Ischypterus; type *Palæoniscus fultus*.)

1849 B, p. 8. (Ischypterus.)

Fraas, O. 1861 A.

Kner, R. 1866 B, p. 318.

Newberry, J. S. 1888 A, p. 24.

Nicholson and Lydekker 1889 A, p. 982.

Owen, R. 1845 B, p. 69.

Pictet, F. J. 1854 A, p. 163.

Quenstedt, F. A. 1852 A, p. 205.

1885 A, p. 320.

Redfield, W. C. 1853 A, p. 271. (Ischypterus.)

1856 A, p. 362. (Ischypterus, in part.)

1857 A. (Ischypterus, in part.)

Strüver, J. 1864 A.

Traquair, R. H. 1877 A. (Ischypterus.)

Williamson, W. C. 1849 A, p. 444.

Woodward, A. S. 1895 A, p. 55.

1898 B, p. 95.

Zittel, K. A. 1890 A, p. 203 (Ischypterus); p. 204 (Semionotus).

Semionotus agassizii (W. C. Redfield).

Redfield, W. C. 1841 A, p. 26. (Palæoniscus.)

De Kay, J. E. 1842 B, p. 386.

Egerton, P. G. 1849 B, p. 10. (Ischypterus.)

Giebel, C. G. 1848 A, p. 245. (Palæoniscus.)

Newberry, J. S. 1888 A, p. 30, pl. iii, fig. 1. (Ischypterus.)

Redfield, W. C. 1843 A, p. 135.

Traquair, R. H. 1877 A, p. 559. (Ischypterus.)

Woodward, A. S. 1891 A, p. 486.

1895 A, p. 62.

Triassic; New Jersey.

Semionotus alatus (Newb.).

Newberry, J. S. 1888 A, p. 37, pl. viii, figs. 1, 2. (Ischypterus.)

1887 A. (Ischypterus; no description.)

Woodward, A. S. 1895 A, p. 63. *

Triassic; New Jersey.

Semionotus braunii (Newb.).

Newberry, J. S. 1888 A, p. 43, pl. xii, fig. 3; pl. xiii, figs. 1, 2. (Ischypterus.)

Gratacap, L. P. 1886 A, p. 243, figure. (Palæoniscus latus, errore.)

Newberry, J. S. 1887 A. (Ischypterus braunii; no description.)

Woodward, A. S. 1895 A, p. 63.

Triassic; New Jersey.

Semionotus elegans (Newb.).

Newberry, J. S. 1888 A, p. 37, pl. vii, fig. 2; pl. x, fig. 1; pl. xiv, figs. 1, 2. (Ischypterus.)

1887 A. (Ischypterus, no description.)

Woodward, A. S. 1895 A, p. 63.

Triassic; New Jersey.

Semionotus fultus (J. H. Redfield.)

Redfield, J. H. 1837 A, p. 37.

Agassiz, L. 1843 B, ii, pp. 43, 102, pl. viii, figs. 4, 5.

De Kay, J. E. 1842 B, p. 385.

Egerton, P. G., in *Lyell, C.* 1847 B, p. 277.

1849 B, p. 10. (Ischypterus.)

Fraas, E. 1861 A.

Giebel, C. G. 1848 A, p. 343. (Palæoniscus.)

Hitchcock, E. 1841 A, p. 459. (Palæoniscus.)

Newberry, J. S. 1888 A, p. 35, pl. vi, fig. 2; pl. vii, fig. 1. (Ischypterus.)

1888 A, p. 41, pl. xii, fig. 1. (I. macropterus.)

Redfield, W. C. 1841 A, p. 25. (Palæoniscus macropterus.)

1843 A, p. 135. (Palæoniscus.)

1857 A, p. 184. (Palæoniscus.)

Traquair, R. H. 1877 A, p. 559. (Ischypterus.)

Woodward, A. S. 1891 A, p. 486.

1895 A, p. 58.

Zittel, K. A. 1890 A, p. 203. (I. macropterus, I. fultus.)

Triassic; Massachusetts, Connecticut, New Jersey.

Semionotus gigas (Newb.).

Newberry, J. S. 1888 A, p. 49, pl. xiv, fig. 3. (Ischypterus.)

1887 A. (Ischypterus; no description.)

Woodward, A. S. 1895 A, p. 63.

Triassic; New Jersey.

Semionotus lenticularis (Newb.).

Newberry, J. S. 1888 A, p. 39, pl. x, figs. 2, 3. (Ischypterus.)

1887 A. (Ischypterus; no description.)

Woodward, A. S. 1895 A, p. 63.

Triassic; New Jersey.

Semionotus lineatus (Newb.).

Newberry, J. S. 1888 A, p. 40, pl. xi, figs. 1, 2. (Ischypterus.)

Woodward, A. S. 1895 A, p. 63.

Triassic; New Jersey.

Semionotus marshii (W. C. Redfield).

Redfield, W. C., in *Newberry, J. S.* 1888 A, p. 28, pl. ii, fig. 1. (Ischypterus.)

1856 A, p. 363. (No description.)

1857 A, p. 188. (No description.)

Woodward, A. S. 1895 A, p. 63.

Triassic; Massachusetts.

Semionotus micropterus (Newb.).

Newberry, J. S. 1888 A, p. 2, pl. xii, fig. 2. (Ischypterus.)

1887 A. (Ischypterus; no description.)

Woodward, A. S. 1895 A, p. 63.

Triassic; Connecticut.

Semionotus minutus (Newb.).

Newberry, J. S. 1888 A, p. 48, pl. xiii, figs. 5, 5a. (Ischypterus.)

1887 A. (Ischypterus; no description.)

Woodward, A. S. 1895 A, p. 63.

Triassic; Connecticut.

Semionotus modestus (Newb.).

Newberry, J. S. 1888 A, p. 38, pl. ix, figs. 1, 3. (Ischypterus.)

1887 A. (Ischypterus; no description.)

Woodward, A. S. 1895 A, p. 63.

Triassic; New Jersey.

Semionotus ovatus (W. C. Redfield).

Redfield, W. C. 1841 A, p. 26.

De Kay, J. E. 1842 B, p. 386.

Egerton, P. G., in Lyell, C. 1847 B, p. 277, pl. ix, fig. 2. ("Tetragonolepis.")

Newberry, J. S. 1888 A, p. 27, pl. i, fig. 1. (Ischypterus.)

Traquair, R. H. 1877 A, p. 559. (Ischypterus.)

Woodward, A. S. 1891 A, p. 486.

1895 A, p. 63.

Triassic; Massachusetts, New Jersey.

Semionotus parvus (W. C. Redfield).

Redfield, W. C., in Newberry, J. S. 1888 A, p. 45, pl. xiii, fig. 4. (Ischypterus.)

Hitchcock, E. 1841 A, pl. xix. (No name.)

Newberry, J. S. 1887 A. (Ischypterus; no description.)

Woodward, A. S. 1895 A, p. 63.

Triassic; Massachusetts.

Semionotus robustus (Newb.).

Newberry, J. S. 1888 A, p. 36, pl. vi, fig. 1. (Ischypterus.)

1887 A. (Ischypterus; no description.)

Woodward, A. S. 1895 A, p. 63.

Triassic; New Jersey.

Semionotus tenuiceps (Agassiz).

Agassiz, L. 1843 B (1835), ii, pt. i, pp. 159, 303, pl. xiv, figs. 4, 5. (Eurynotus.)

"D. L. H." 1838 A, p. 199. (Palæoniscus latus.)

Deecke, W., Palæontographica, xxxv, p. 14. (Allolepidotus americanus.)

Egerton, P. G. 1849 B, p. 10. (Ischypterus.)

Emmons, E. 1857 A, p. 143, figs. 1, 2 (Ischypterus macropterus); p. 144, pl. ixa, fig. 3; text fig. 112 (Eurinotus tenuiceps, var. ceratocephalus).

1860 A, p. 188, fig. 164. (Eurinotus ceratocephalus.)

Giebel, C. G. 1848 A, p. 236.

Hitchcock, E. 1841 A, p. 459, pl. xxix, figs. 1 and 2. (Eurynotus.)

Newberry, J. S. 1888 A, p. 32, pl. v, figs. 1-3; pl. vii, fig. 3; p. 46, pl. xiii, fig. 3. (S. latus.)

Redfield, J. H. 1837 A, p. 39 (Eurynotus tenuiceps); p. 38, pl. ii (Palæoniscus latus).

Redfield, W. C. 1841 A, p. 26. (Palæoniscus latus.)

1843 A, p. 135. (P. latus.)

1856 A, p. 362. (P. latus.)

Traquair, R. H. 1877 A, p. 559. (Ischypterus.)

Woodward, A. S. 1891 A, p. 531 (S. tenuiceps); p. 486 (Palæoniscus latus).

1895 A, p. 59.

Triassic; Massachusetts, Connecticut, New Jersey.

LEPISOSTEIDÆ.

Beard, J. 1890, A, p. 183.

Brühl, B. C. 1847 A. (Lepidosteus.)

Cope, E. D. 1872 C, p. 330.

1878 A, p. 295.

1884 O, p. 52.

1887 O, p. 1018.

1889 R, p. 857.

Günther, A. 1870 A, p. 328.

1880 A, p. 367.

1881 A, p. 687.

Hay, O. P. 1895 A.

Hertwig, O. 1879 A.

Huxley, T. H. 1861 B, p. 28. (Lepidosteini.)

Jordan and Evermann 1896 A, p. 108.

Klaatsch, H. 1890 A, p. 125.

Kölliker, A. 1859 A. (Lepidosteini.)

Lütken, C. 1863 B, p. 430.

Müller, J. 1846 A, p. 208. (Lepidosteini.)

1846 B, p. 85. (Lepidosteini.)

Newberry, J. S. 1873 A, p. 255.

Nicholson and Lydekker 1889 A, p. 988.

Stannius, H. 1854 A. (Lepidosteini.)

Ussow, S. 1900 A. ("Lepidostien.")

Woodward, A. S. 1895 A, pp. xviii, 140.

Zittel, K. A. 1890 A, p. 222. (Ginglymodi.)

LEPISOSTEUS Lacépède. Type *L. gavalis* = *L. osseus*.

Lacépède, 1803, Hist. Nat. Poissons, vol. v, p. 331.

Most authors employ the orthography *Lepidosteus*. The original is given above.

Agassiz, L. 1843 B, ii, pt. ii, p. 4. (Lepidosteus.)

Allis, E. P. 1900 A, p. 273.

Andrée, A. 1893 B. (Lepidosteus, Clastes.)

Balfour, F. M. 1882 A.

Baur, G. 1889 E.

1889 F, p. 469.

Beard, J. 1890 A, p. 182.

Bridge, T. W. 1896 A, p. 540.

Brühl, B. C. 1847 A.

Cope, E. D. 1869 F, p. 242. (Pneumatosteus, type *P. nahunticus*.)

1872 C, p. 319.

1873 E, p. 633. (Clastes, type *C. anax*.)

1875 C, p. 37. (Clastes.)

Cope, E. D. 1875 V, p. 30. (Pneumatosteus.)

1881 D, p. 184. (Clastes.)

1884 O, p. 52 (Pneumatosteus); p. 53 (Clastes).

Davidoff, M. 1880 A.

1880 B.

Eastman, C. R. 1900 A, p. 68.

Gadow and Abbott 1895 A.

Gegenbaur, C. 1865 B, p. 104, pl. vi, fig. 5; pl. viii, fig. 5.

1895 A, p. 6.

Goette, A. 1878 A, p. 453.

Günther, A. 1870 A, p. 328.

1880 A, p. 367.

Hay, O. P. 1895 A.

1896 B, p. 959.

1898 C, p. 345.

- Hertwig, O. 1879 A, pls. i, ii.
 Huxley, T. H. 1872 A, p. 124.
 1883 A.
 Klaatsch, H. 1890 A, p. 125.
 Kosmak, G. W. 1895 A, p. 8.
 Mackintosh, H. W. 1878 A, pl. ii, fig. 6.
 Marsh, O. C. 1898 E, p. 567.
 Müller, J. 1846 A.
 1846 B.
 1846 C.
 Nickerson, W. S. 1893 A.
 Nicholson and Lydekker 1889 A, p. 988. (Pneumatosteus.)
 Owen, R. 1845 B, p. 74, pl. xxxv.
 Parker, W. K. 1882 A.
 Reissner, E. 1859 A, p. 254, pl. v.
 Röse, C. 1894 B.
 Stannius, H. 1846 A.
 1854 A.
 Stephan, P. 1900 A.
 Thacher, J. K. 1877 B, pl. ii, fig. 3.
 Traquair, R. H. 1896 A, p. 126.
 1900 B, p. 523.
 Van Wijhe, J. W. 1882 A, p. 265.
 White C. A. 1883 A. (Clastes.)
 Williamson, W. C. 1849 A, p. 439, pl. xl, figs. 1, 2.
 Woodward, A. S. 1895 A, p. 440 (Lepidosteus); p. 445 (Clastes).
 Zittel, K. A. 1890 A, p. 222. (Lepidosteus, Clastes.)
 Zograf, N. 1896 A.

Lepisosteus aganus (Cope).

- Cope, E. D.* 1877 K, p. 38, pl. xxiii, figs. 10-29 (Clastes.)
 Eocene (Wasatch); New Mexico.

Lepisosteus atrox Leidy.

- Leidy, J.* 1873 D, p. 97.
Cope, E. D. 1873 E, p. 633 (Clastes anax); p. 634 (C. atrox).
 1884 O, p. 53, pl. ii, figs. 50-52 (Clastes anax); p. 54, pl. ii, figs. 1, 2 (C. atrox).
 Eastman, C. R. 1900 A, p. 69, pl. i, fig. 2; pl. ii. (Lepidosteus.)
 1900 E, p. 57. (Lepidosteus.)
 Leidy, J. 1873 B, pp. 189, 349, pl. xxxii, figs. 14, 15.
 Woodward, A. S. 1895 A, p. 444 (C. atrox); p. 445 (C. anax).
 Eocene (Bridger); Wyoming.

Lepisosteus cuneatus (Cope).

- Cope, E. D.* 1884 O, p. 55, pl. i, fig. 6. (Clastes.)
 1880 T, p. 303. (Clastes.)
 Eastman, C. R. 1900 A, p. 68. (Lepidosteus.)
 1900 E, p. 57. (Lepidosteus.)
 Eocene (Manti beds); Utah.

Lepisosteus cycliferus (Cope).

- Cope, E. D.* 1873 E, p. 634. (Clastes.)
 1877 K, p. 40. (Clastes.)
 1884 O, p. 54, pl. ii, figs. 25-45. (Clastes.)
 Eastman, C. R. 1900 A, p. 68. (Lepidosteus.)
 Woodward, A. S. 1895 A, p. 445. (Clastes.)
 Eocene (Bridger); Wyoming.

Lepisosteus glaber Marsh.

- Marsh, O. C.* 1871 G, p. 105.
Cope, E. D. 1873 E, p. 634. (Clastes.)
 1884 O, p. 53.
 Eastman, C. R. 1900 A, p. 67.
 King, C. 1878 A, p. 376 (Clastes?); p. 405.
 Woodward, A. S. 1895 A, p. 444.
 Eocene (Bridger); Wyoming.

Lepisosteus integer (Cope).

- Cope, E. D.* 1877 K, p. 41, pl. xxiv, figs. 1-16. (Clastes.)
 Eocene (Wasatch); New Mexico.

Lepisosteus nahunticus (Cope).

- Cope, E. D.* 1869 F, p. 242. (Pneumatosteus.)
 1875 V, p. 31. (Pneumatosteus.)
 Eastman, C. R. 1900 A, p. 68. (Lepidosteus.)
 Miocene; North Carolina.

Lepisosteus notabilis Leidy.

- Leidy, J.* 1873 D, p. 98.
Cope, E. D. 1877 K, p. 40. (Clastes.)
 Eastman, C. R. 1900 A, p. 68. (Lepidosteus.)
 Leidy, J. 1873 B, pp. 192, 349, pl. xxxi, figs. 12, 13.
 Woodward, A. S. 1895 A, p. 444.
 Eocene (Bridger); Wyoming.

Lepisosteus occidentalis Leidy.

- Leidy, J.* 1856 F, p. 73. (Lepidotus.)
Cope, E. D. 1877 G, p. 574. (Lepidosteus.)
 1884 O, p. 52. (Clastes.)
 Leidy, J. 1856 C, p. 120. (Lepidotus haydeni; L. occidentalis.)
 1856 F, p. 73. (Lepidotus haydeni.)
 1860 A, p. 149, pl. xi, figs. 20-23. (Lepidotus.)
 Woodward, A. S. 1895 A, p. 125 (Lepidotus haydeni); p. 126 (L. occidentalis).
 Cretaceous (Laramie); Wyoming.

Lepisosteus osseus (Linn.).

- Linnaeus, C.* 1758, Syst. Nat., ed. x, p. 313. (Esosx.)
 Agassiz, L. 1843 B (1836), ii, pt. ii, p. i, pls. B', B".
 Jordan and Evermann 1896 A, p. 110.
 Leidy, J. 1860 B, p. 118, pl. xxv, fig. 1. (L. bison?).
 Stephan, P. 1900 A, p. 355, fig. 3.
 Williamson, W. C. 1849 A, p. 439, pl. xl, figs. 1, 2.
 Recent; Vermont to Texas: Post-pliocene:
 South Carolina.

Lepisosteus simplex Leidy.

- Leidy, J.* 1873 D, p. 98.
Cope, E. D. 1877 K, p. 40. (Clastes.)
 Eastman, C. R. 1900 A, p. 74, pl. i, fig. 1.
 Leidy, J. 1873 B, pp. 191, 349, pl. xxxii, figs. 18, 26, 31-43.
 Woodward, A. S. 1895 A, p. 444.
 Eocene (Bridger); Wyoming.

Lepisosteus whitneyi Marsh.

- Marsh, O. C.* 1871 G, p. 105.
 Eastman, C. R. 1900 A, p. 67.
 King, C. 1878 A, p. 405.
 Woodward, A. S. 1895 A, p. 445.
 Eocene (Bridger); Wyoming.

Suborder HALECOMORPHI Cope.¹

Cope, E. D. 1872 C, p. 330.

1877 N, p. 58.

1878 A, p. 295.

1887 O, p. 1018.

1889 R, p. 857.

Gill, T. 1872 C, p. 21. (Cycloganoidei.)

Günther, A. 1880 A, p. 370.

1881 A, p. 688. (Amioidei.)

Haeckel, E. 1895 A, p. 236. (Amiacei.)

Hay, O. P. 1898 C, p. 341. (No name.)

Heckel, J. J. 1850 A.

Huxley, T. H. 1861 B, p. 24. (Amiadæ, as suborder.)

Steinmann and Döderlein 1890 A, p. 576. (Amioidei.)

Traquair, R. H. 1896 A, p. 125. (Protospondyli, in part.)

Wagner, A. 1861 B, p. 43. (No name.)

Woodward, A. S. 1893 A, p. 413. ("Amioidei.")

1895 A, p. xxii; p. 48. (Protospondyli, in part.)

1898 B, p. 94. (Protospondyli, i part.)

Zittel, K. A. 1890 A, pp. 222, 899.

1896 A, p. 410. (Protospondyli.)

ISOPHOLIDÆ.

Hay, O. P. 1899 E, p. 790.

The generic name *Eugnathus*, being preoccupied, must be succeeded by *Isopholis* Zittel. The family name also must be changed accordingly.

Agassiz, L. 1843 B (1844), ii, p. 97. (Eugnathus.)

Hay, O. P. 1898 C, p. 346. (Eugnathidæ.)

Nicholson and Lydekker 1889 A, p. 986. (Eugnathidæ.)

Quenstedt, F. A. 1852 A, p. 204. (Eugnathus.)

1885 A, p. 319. (Eugnathus.)

Wagner, A. 1863 A, p. 670. (Eugnathus.)

Woodward, A. S. 1895 A, pp. xiv, 285. (Eugnathidæ.)

1898 B, p. 106. (Eugnathidæ.)

Zittel, K. A. 1890 A, p. 212. (Saurodontidæ, in part.)

PTYCHOLEPIS Agassiz. Type *P. bollensis* Agassiz.

Agassiz L., 1832, Neues Jahrb. Mineral., p. 132. (Fide A. S. Woodward.)

1843 B (1844), ii, pt. ii, p. 107.

Bronn, H. G. 1837 A, p. 488.

Egerton, P. G. 1852 B.

Newberry, J. S. 1888 A, p. 65.

Quenstedt, F. A. 1852 A, p. 203.

1885 A, p. 318.

Steinmann, and Döderlein 1890 A, p. 572.

Williamson, W. C. 1849 A, p. 444.

Woodward, A. S. 1895 A, p. 316.

1895 D.

Zittel, K. A. 1890 A, p. 213.

Ptycholepis marshii Newb.

Newberry, J. S. 1878 B.

Lesley, J. P. 1889 A, p. 830, figure.

Newberry, J. S. 1888 A, p. 66, pl. xix, figs. 1-2a.

Woodward, A. S. 1895 A, p. 324.

Triassic; Connecticut.

MACROSEMIIDÆ.

Cope, E. D. 1889 R, p. 858.

Agassiz, L., 1834, Neues Jahrb. Mineral., p. 387. (Macrosemius.)

Bronn, H. G. 1837 A, p. 492. (Macrosemius.)

Hay, O. P. 1898 C, p. 347.

Wagner, A. 1851 A, p. 73. (Macrosemius.)

Woodward, A. S. 1895 A, p. 163.

MACREPISTIUS Cope. Type *M. arenatus* Cope.

Cope, E. D. 1894 F, p. 441.

Woodward, A. S. 1895 A, p. 173.

Macrepistius arenatus Cope.

Cope, E. D. 1894 F, p. 441, pl. xix, fig. 2.

Cope, E. D. 1894 A, p. 65.

Woodward, A. S. 1895 A, p. 173.

Cretaceous (Trinity); Texas.

PACHYCORMIDÆ.

Woodward, A. S. 1895 A, p. 374.

Cope, E. D. 1875 E, p. 244 A. (Order Actinochiri; family Pelecopteridæ.)

1877 J, p. 822. (Erisichtheidæ.)

1878 A, p. 299. (Actinochiri; Pelecopteridæ.)

1892 V. (Protosphyrenidæ.)

Crook, A. R. 1892 A, p. 109. (Protosphyrenidæ.)

Dollo, L. 1892 B, p. 182. (Protosphyrenidæ.)

Felix, J. 1890 A, p. 302. (Pelecpteridæ.)

Loomis, F. B. 1900 A, p. 221.

Nicholson and Lydekker 1889 A, p. 996. (Protosphyrenidæ.)

Stewart, A. 1900 A, p. 362.

Woodward, A. S. 1897 A, p. 158.

1898 B, p. 109.

¹ This subordinal name is here employed in a wider sense than was given to it by Cope.

PROTOSPHYRÆNA Leidy. Type *P. ferox* Leidy.

Leidy, J. 1856 O, p. 302.

Agassiz, L. 1843 B, Feuille (1835), p. 55; iii (1839), p. 150, pl. xa, figs. 1-4 (Ptychodus, in part); v, pt. 1 (1844), p. 102 (Saurocephalus).

Cope, E. D. 1871 D, p. 415.

1872 F, p. 340.

1872 EE, p. 281. (Erisichthe, type *E. nitida*.)

1874 C, p. 41. (Erisichthe.)

1875 E, pp. 189, 217, 275 (Erisichthe); p. 244 C (Pelecopterus).

1877 J, p. 821. (Erisichthe.)

1878 A, pp. 298, 299. (Erisichthe and Pelecopterus.)

1878 O. (Erisichthe.)

1886 R.

1886 S. (Protosphyraena and Pelecopterus.)

1888 V.

1892 V.

1892 W.

Davies, W. 1878 A.

1886 A.

Felix, J. 1890 A.

Hay, O. P. 1898 D, p. 26.

Hitchcock, Fanny R. 1888 A. (Pelecopterus.)

Leidy, J. 1857 I.

Loomis, F. B. 1900 A, p. 215.

Newton, E. T. 1878 A.

1878, in Dixon 1878 A, p. 401.

Nicholson and Lydekker 1889 A, p. 996.

Stewart, A. 1898 A, p. 22.

1900 A, p. 362.

Woodward, A. S. 1888 I, p. 320.

1894 A.

1895 A, p. 399.

1898 B, p. 111.

Woodward, H. 1886 A, p. 4. (Pelecopterus.)

Zittel, K. A. 1890 A, p. 78 (Pelecopterus, syn. of Ptychodus); p. 261 (Pelecopterus); p. 263 (Protosphyraena).

1896 A, p. 412.

Protosphyraena angulata Cope.

Cope, E. D. 1872 I, pp. 333, 337. (Portheus.)

1872 F, p. 342. (Portheus.)

1872 EE, p. 281. (Erisichthe.)

1875 E, p. 275. (Erisichthe.)

1875 V, p. 32.

Felix, J. 1890 A, p. 293. (Portheus.)

Loomis, F. B. 1900 A, p. 222.

Newton, E. T. 1878 A, p. 794.

Woodward, A. S. 1895 A, p. 413.

Cretaceous; North Carolina.

Protosphyraena bentoniana Stewart.

Stewart, A. 1898 A, p. 27, pl. i, figs. 2-3b. (P. bentonia, *errore typog.*)

1900 A, p. 365. (P. bentoniana.)

Cretaceous (Niobrara); Kansas.

Protosphyraena chirurgus (Cope).

Cope, E. D. 1875 E, pp. 244 E, 273, pl. xlviii, fig. 1: pl. liv, fig. 9. (Pelecopterus.)

Cretaceous (Niobrara); Kansas.

Protosphyraena dimidiata (Cope).

Cope, E. D. 1878 A, p. 300. (Erisichthe.)

Cope, E. D. 1877 J, p. 822. (*E. nitida*, in part.)
Cretaceous (Niobrara); Kansas.

Protosphyraena gigas Stewart.

Stewart, A. 1899 C, p. 110.

Loomis, F. B. 1900 A, p. 221.

Stewart, A. 1900 A, p. 367.

Cretaceous (Pierre); Kansas.

Protosphyraena gladius (Cope).

Cope, E. D. 1873 N, p. 337. (Portheus.)

1874 C, p. 40. (Portheus.)

1875 E, pp. 244 E, 273, pl. xlv, fig. 12; pl. lii, fig. 3. (Pelecopterus.)

Cretaceous (Niobrara); Kansas.

Protosphyraena nitida (Cope).

Cope, E. D. 1872 EE, p. 280. (Erisichthe.)

1874 C, p. 42. (Erisichthe.)

1875 E, pp. 217, 275, pl. xlviii, figs. 3-8. (Erisichthe.)

1877 J, p. 821. (Erisichthe nitida, in part; see *P. dimidiata*.)

Felix, J. 1890 A, pls. xii-xiv.

Loomis, F. B. 1900 A, p. 227, pl. xix, figs. 6, 7; p. 223, text fig. 4, c.

Newton, E. T. 1878 A, p. 794.

Woodward, A. S. 1895 A, p. 409.

Cretaceous (Niobrara); Kansas.

Protosphyraena obliquidens Loomis.

Loomis, F. B. 1900 A, p. 225, pl. xx, figs. 1-4.

Cretaceous (Niobrara); Kansas.

Protosphyraena penetrans (Cope).

Cope, E. D. 1877 J, p. 822. (Erisichthe.)

Crook, A. R. 1892 A, p. 109.

Felix, J. 1890 A, p. 297, pl. xiv, fig. 1.

Loomis, F. B. 1900 A, p. 224, pl. xix, figs. 1-5; p. 223, text fig. 4, b.

Newton, E. T. 1878 A, p. 795.

Stewart, A. 1898 D, p. 192.

1900 A, p. 369, pl. lxiii; text fig. 4.

Woodward, A. S. 1895 A, p. 409.

Cretaceous (Niobrara); Kansas.

Protosphyraena pernicioso (Cope).

Cope, E. D. 1874 C, p. 41. (Ichthyodectes.)

1875 E, pp. 244 D, 273, pl. xlv, fig. 13; pl. xlviii, fig. 2; pl. lii, fig. 2. (Pelecopterus.)

Woodward, A. S. 1895 A, p. 414.

Cretaceous (Niobrara); Kansas.

Protosphyraena recurvirostris Stewart.

Stewart, A. 1898 D, p. 191, text fig. 1.

1900 A, p. 366, text fig. 2.

Cretaceous (Niobrara); Kansas.

Protosphyraena tenuis Loomis.

Loomis, F. B. 1900 A, p. 226, pl. xx, figs. 5-7; p. 223, text fig. 4, a.

Cretaceous (Niobrara); Kansas.

Protosphyraena ziphioides (Cope).

Cope, E. D. 1877 J, p. 823. (Erisichthe.)

- Felix, J. 1890 A, p. 297.
 Loomis, F. B. 1900 A, p. 222. (Erisichthe xiphiodes.)
 Newton, E. T. 1878 A, p. 795.
 Woodward, A. S. 1895 A, p. 413.
 Cretaceous (Niobrara); Kansas.

Protosphyraena occidentalis Stew.

- Stewart, A. 1898 A, p. 28, pl. i, figs. 1a, 1b.
 1900 A, p. 368, pl. lvii, figs. 1a, 1b.
 Cretaceous (Niobrara); Kansas.

AMIIDÆ.

- Baur, G. 1889 F, p. 470.
 Beard, J. 1890 A, p. 184.
 Bridge, T. W. 1877 A.
 1896 A, p. 537.
 Cope, E. D. 1872 C, p. 330.
 1877 N, p. 58.
 1878 A, p. 295.
 1887 O, p. 1018.
 1889 R, p. 857.
 Günther, A. 1870 A, p. 324.
 1880 A, p. 372.
 1881 A, p. 688.

- Hay, O. P. 1898 C, p. 347.
 Huxley, T. H. 1872 A, p. 127.
 Jordan and Evermann 1896 A, p. 112.
 Klaatsch, H. 1890 A, p. 178.
 Kölliker, A. 1859 A, p. 7.
 Lütken, C. 1873 A, p. 39.
 Nicholson and Lydekker 1889 A, p. 988.
 Pictet, F. J. 1854 A, p. 134. (Amiades.)
 Steinmann and Döderlein 1890 A, p. 577.
 Woodward, A. S. 1895 A, pp. xvi, 360.
 Zittel, K. A. 1890 A, p. 233. (Halecomorphi.)

Amiopsis Kner. Type *A. prisca* Kner.

- Kner, R. 1863 A, p. 126.
 Woodward, A. S. 1895 A, p. 371.
 Zittel, K. A. 1890 A, p. 234.

Amiopsis ? dartoni Eastman.

- Eastman, C. R. 1899 E, p. 406, pl. xlvi, figs. 1, 2.
 Jurassic: South Dakota.

AMIA Linn. Type *A. calva* Linn.

- Linnæus* C., 1766, Syst. Nat., ed. xii, p. 500.
 Allis, E. P. 1889 A.
 1899 A.
 1899 B.
 1900 A.
 Andree, A. 1893 B.
 Baur, G. 1889 F, p. 469.
 1896 C, p. 662.
 Beard, J. 1890 A, p. 182.
 Bridge T. W. 1877 A.
 1896 A, p. 537.
 Cope, E. D. 1872 C, p. 319.
 1879 N.
 1884 O, pp. 742, 745.
 1897 A, p. 321.
 Davidoff, M. 1880 A.
 1880 B.
 Dean, B. 1895 A.
 Franque, H. 1847 A.
 Gadow and Abbott 1895 A,
 Gegenbaur, C. 1865 B, p. 102, pl. vi, fig. 4; pl. viii,
 fig. 7.
 1895 A, p. 6.
 Goette, A. 1878 A, p. 453.
 Günther, A. 1870 A, p. 324.
 Hay, O. P. 1895 A.
 1898 C, p. 343.
 Hulke, J. W. 1858 A, p. 424.
 Huxley, T. H. 1872 A, p. 124.
 1876 A, p. 57.
 1883 A.
 Jordan and Evermann 1896 A, p. 112.
 Klaatsch, H. 1890 A, p. 178.
 1896 A, p. 323.
 Kner, R. 1863 A, p. 126.
 Kölliker, A. 1859 A.
 1860 A.
 1863 A, p. 38, figs. 17-19.
 Leidy, J. 1873 B, p. 185. (Protamia and Hypamia).

- Leidy, J. 1873 D, p. 98. (Protamia and Hypamia).
 Lütken, C. 1873 A, p. 39.
 Mackintosh, H. W. 1878 A, pls. i, ii.
 Marsh, O. C. 1877 E.
 Müller, J. 1846 A, p. 201.
 1846 B, p. 78.
 1846 C.
 Newton, E. T. 1899 A, p. 1.
 Nicholson and Lydekker 1889 A, p. 987.
 Owen, R. 1845 B, p. 75.
 Parker, W. K. 1882 A, p. 488.
 Ryder, J. A. 1886 A, p. 1001.
 Sagemehl, M. 1883 A.
 1884 A.
 Shufeldt, R. 1885 B.
 Stannius, H. 1846 A.
 1854 A.
 Stephan, P. 1900 A.
 Thacher, J. K. 1877 B, pl. ii, fig. 6.
 Traquair, R. H. 1896 A, p. 125.
 1900 B, p. 524.
 Van Wijhe, J. W. 1882 A, p. 279.
 Woodward, A. S. 1895 A, p. 367.
 Zittel, K. A. 1890 A, p. 235.

Amia depressa Marsh.

- Marsh, O. C. 1871 G, p. 105.
 King, C. 1878 A, p. 405.
 Osborn, Scott, and Speir 1878 A, p. 102. (Identification doubtful.)
 Woodward, A. S. 1895 A, p. 372.
 Eocene (Bridger); Wyoming.

Amia dictyocephala Cope.

- Cope, E. D. 1875 G, p. 3.
 1884 O, p. 745, pl. lix, fig. 1.

Woodward, A. S. 1895 A, p. 372.

Eocene (Amyzon shales); Colorado.

"*Amia reticulata*," referred to by Cope in works above cited, appears to be a rejected name for *A. dictyocephala*.

***Amia elegans* Leidy.**

Leidy, J. 1873 D, p. 98. [*Amia* (Hypamia).]

King, C. 1878 A, p. 405. (Hypamia.)

Leidy, J. 1873 B, pp. 189, 349, pl. xxxii, figs. 19-22. [*Amia* (Hypamia).]

Woodward, A. S. 1895 A, p. 373.

Eocene (Bridger); Wyoming.

***Amia gracilis* Leidy.**

Leidy, J. 1873 D, p. 98. [*Amia* (Protamia).]

1873 B, pp. 188, 348, pl. xxxii, figs. 23, 24. [*Amia* (Protamia).]

Woodward, A. S. 1895 A, p. 373.

Eocene (Bridger); Wyoming.

***Amia macrospondyla* Cope.**

Cope, E. D. 1891 A, p. 2, pl. i, fig. 2.

Woodward, A. S. 1895 A, p. 372.

Miocene; N. W. Territory, Canada.

***Amia media* Leidy.**

Leidy, J. 1873 D, p. 98. (Protamia.)

King, C. 1878 A, p. 405.

PAPPICHTHYS Cope. Type *P. plicatus* Cope.

Cope, E. D. 1873 E, p. 634.

Andreae, A. 1893 B.

Cope, E. D. 1881 D, p. 184.

1882 E, p. 190.

1884 O, p. 56.

Hay, O. P. 1895 A, p. 12.

Newton, E. T. 1899 A, p. 2.

Nicholson and Lydekker 1889 A, p. 991.

Woodward, A. S. 1895 A, p. 373.

Zittel, K. A. 1890 A, p. 236.

***Pappichthys corsoni* Cope.**

Cope, E. D. 1873 E, p. 636.

1873 E, p. 636. (P. symphysis.)

1884 O, p. 60, pl. iv, figs. 21-36.

Osborn, Scott, and Speir 1878 A, p. 104.

Woodward, A. S. 1895 A, p. 373.

Eocene (Bridger); Wyoming.

***Pappichthys lævis* Cope.**

Cope, E. D. 1873 E, p. 636.

Leidy, J. 1873 B, pp. 188, 348, pl. xxxii, figs. 7-11.

[*Amia* (Protamia).]

Woodward, A. S. 1895 A, p. 373.

Eocene (Bridger); Wyoming.

***Amia newberriana* Marsh.**

Marsh, O. C. 1871 G, p. 105.

King, C. 1878 A, p. 405.

Woodward, A. S. 1895 A, p. 372.

Eocene (Bridger); Wyoming.

***Amia scutata* Cope.**

Cope, E. D. 1875 G, p. 3.

1884 O, p. 745, pl. lx, fig. 1.

Osborn, Scott, and Speir 1878 A, p. 102.

Woodward, A. S. 1895 A, p. 372.

Eocene (Amyzon shales); Colorado.

***Amia uintaensis* Leidy.**

Leidy, J. 1873 D, p. 98. [*Amia* (Protamia).]

King, C. 1878 A, p. 405.

Leidy, J. 1873 B, pp. 185, 348, pl. xxxii, figs. 1-6. (Protamia.)

Osborn, Scott, and Speir 1878 A, p. 101.

Woodward, A. S. 1895 A, p. 373.

Eocene (Bridger); Wyoming.

***Amia whiteavesiana* Cope.**

Cope, E. D. 1891 A, p. 2, pl. i, fig. 1.

Woodward, A. S. 1895 A, p. 372.

Lower Miocene; N. W. Territory, Canada.

Cope, E. D. 1884 O, p. 58, pl. iii, figs. 2-11.

Osborn, Scott, and Speir 1878 A, p. 104.

Woodward, A. S. 1895 A, p. 373.

Eocene (Bridger); Wyoming.

***Pappichthys plicatus* Cope.**

Cope, E. D. 1873 E, p. 634.

1884 O, p. 59, pl. iii, figs. 12-19; pl. iv, figs. 1-5.

King, C. 1878 A, p. 405.

Osborn, Scott, and Speir 1878 A, p. 104.

Woodward, A. S. 1895 A, p. 373.

Eocene (Bridger); Wyoming.

***Pappichthys sclerops* Cope.**

Cope, E. D. 1873 E, p. 635.

1884 O, p. 57, pl. iii, fig. 1.

Woodward, A. S. 1895 A, p. 373.

Eocene (Bridger); Wyoming.

Order NEMATOGNATHI Gill.

Gill, T. 1861 A, pp. 11, 56.

Allis, E. P. 1900 A, p. 271.

Bridge and Haddon 1892 A.

Brühl, B. C. 1847 A. ("Siluroiden.")

Cope, E. D. 1872 (, p. 330.

1878 A, p. 295.

1884 O, p. 61.

1886 D, p. 1031.

1889 R, p. 857.

Dean, B. 1891 A, p. 315. ("Siluroids.")

Gill, T. 1872 C, pp. xxxviii, 18.

1893 A, p. 132.

1896 C, p. 912. ("Siluroids.")

Göldi, E. A. 1883 A.

1884 A.

Hertwig, O. 1876 A. (Siluroidei.)

Jordan and Evermann 1896 A, p. 114.

McMurrich, J. P. 1884 B.

Müller, J. 1846 B, p. 82. ("Siluroiden.")
 Parker, W. K. 1868 A, p. 22. ("Siluroids.")
 Pollard, H. B. 1894 A.
 1895 A.

Stannius, H. 1854 A. (Siluroidei.)
 Woodward, A. S. 1898 B, p. 119.
 Zittel, K. A. 1890 A, p. 260.

SILURIDÆ.

Bridge, W. J. 1879 A.
 1896 A, p. 550.
 Bridge and Haddon 1889 A.
 1892 A.
 Brühl, B. C. 1847 A. ("Siluroiden.")
 Cope, E. D. 1872 C, p. 331.
 Dareste, C. 1872 A, p. 945. ("Siluroides.")
 Davis, J. W. 1880 A, p. 355.
 Gegenbaur, C. 1869 B.
 1898 A.
 Gill, T. 1893 A, p. 132.
 Göldi, E. A. 1883 A.
 1884 A.
 Günther, A. 1864 A, p. 1.
 1880 A, p. 559.
 1881 A, p. 692.
 Hertwig, O. 1876 A.
 Huxley, T. H. 1861 B, p. 33.
 Ihering, H. 1891 B, p. 498.
 Jordan, D. S. 1891 A.
 Jordan and Evermann 1896 A, p. 115.
 Klaatsch, H. 1890 A, p. 184.
 Klein, E. F. 1881 A.

Klein, E. F. 1886 A.
 Koken, E. 1891 B, p. 26.
 Kölliker, A. 1859 A. (Siluroidei.)
 McMurrich, J. P. 1884 A.
 1884 B.
 Nicholson and Lydekker 1889 A, p. 1001.
 Newton, E. 1889 A.
 Owen, R. 1845 B, p. 86. ("Siluroids.")
 1886 A, p. 10 *et seq.*
 Pictet, F. J. 1854 A, p. 119. ("Siluriens.")
 Pollard, H. B. 1894 A.
 1894 B.
 1895 A.
 Ryder, J. A. 1886 A, p. 1003. (Ameiurus.)
 Sagemehl, M. 1884 A, p. 1.
 Stannius, H. 1854 A. (Siluroidei.)
 Stephan, P. 1900 A. ("Siluridés.")
 Vaillant, L. 1883 A.
 Woodward, A. S. 1889 C.
 1891 D.
 Wright, R. R. 1884 A.
 Zittel, K. A. 1890 A, p. 260.

RHINEASTES Cope. Type *R. peltatus* Cope.

Cope, E. D. 1872 R, p. 486.
 1878 E, p. 637 (Phareolon, in part); p. 638
 (Rhineastes, with subgenera Rhineastes
 and Astephus).
 1884 O, p. 62. (With subgenera Rhineastes
 and Astephus.)
 1891 A, p. 2.
 Nicholson and Lydekker 1889 A, p. 1002.
 Osborn, Scott, and Speir 1878 A, p. 100. (Sp. indet.
 described.)

Rhineastes arcuatus Cope.

Cope, E. D. 1873 E, pp. 638, 641.
 1884 O, pp. 63, 66, pl. v, fig. 12.
 Leidy, J. 1873 D, p. 99. (Pimelodus antiquus;
 no description.)
 1873 B, pp. 193, 348, pl. xxxii, figs. 44-46.
 (Pimelodus antiquus.)
 Eocene (Bridger); Wyoming.

Rhineastes calvus Cope.

Cope, E. D. 1873 E, pp. 638, 640.
 1884 O, pp. 63, 66, pl. v, figs. 3, 4.
 Eocene (Bridger); Wyoming.

Rhineastes pectinatus Cope.

Cope, E. D. 1874 D, p. 49.

Cope, E. D. 1874 B, p. 459.
 1875 G, p. 3.
 1884 O, p. 747, pl. v, fig. 13.
 Tertiary (Eocene?); Colorado.

Rhineastes peltatus Cope.

Cope, E. D. 1872 R, p. 486.
 1873 E, p. 639.
 1884 O, p. 63, pl. v, figs. 1, 2.
 Eocene (Bridger); Wyoming.

Rhineastes radulus Cope.

Cope, E. D. 1873 E, pp. 638, 639.
 1884 O, p. 67, pl. v, figs. 14-17.
 King, C. 1878 A, p. 405.
 Eocene (Bridger); Wyoming.

Rhineastes rhæas Cope.

Cope, E. D. 1891 A, p. 3, pl. i, fig. 3.
 Oligocene or Lower Miocene; Northwest
 Territory, Canada.

Rhineastes smithii Cope.

Cope, E. D. 1872 R, p. 486.
 1873 E, p. 639.
 1884 O, pp. 63, 64, pl. v, figs. 5-11.
 Eocene (Bridger); Wyoming.

AMEIURUS Rafinesque. Type *A. cupreus* Raf. = *A. natalis* Le Sueur.

Rafinesque, C. S., 1820, Ichthyol. Ohioensis, p. 65.
 Allis, E. P. 1900 A, p. 271.
 Günther, A. 1864 A, p. 98. (Amiurus.)
 1880 A, p. 567. (Amiurus.)
 Jordan and Evermann 1896 A, p. 135.

McMurrich, J. P. 1884 A.
 1884 B.
 Ryder, J. A. 1886 A, p. 1003.
 Wright, R. R. 1884 A.

Ameiurus cancellatus Cope.

Cope, *E. D.* 1891 A, p. 3, pl. i, figs. 4, 5.
Oligocene; Northwest Territory, Canada.

Ameiurus maconnellii Cope.

Cope, *E. D.* 1891 A, p. 4, pl. i, figs. 6, 7.
Oligocene; Northwest Territory, Canada.

Order ISOSPONDYLI Cope.

Cope, *E. D.* 1872 C, p. 332.

1877 N, p. 60.

1878 A, pp. 295, 298.

1884 O, p. 67.

1887 O, p. 1018.

1889 R, p. 857.

Gill, T. 1872 C, p. 15.

Jordan, D. S. 1891 A, p. 112.

Jordan and Evermann 1896 A, p. 407.

Traquair, R. H. 1896 A, p. 126.

1900 B, p. 524.

Woodward, A. S. 1895 A, pp. xix, 446.

1898 B, p. 113.

PHOLIDOPHORIDÆ.

Eastman, C. R. 1899 E, p. 399.

Traquair, R. H. 1890 B, p. 524.

Woodward, A. S. 1890 D, p. 43.

1895 A, p. 446.

Woodward, A. S. 1898 B, p. 114.

Zittel, K. A. 1890 A, p. 212. (Saurodontidæ, in part).

PHOLIDOPHORUS Agassiz. Type *P. bechei* Agassiz.

Agassiz, L., 1832, Neues Jahrb. Mineral., p. 145.

1843 B (1844), ii, pt. 1, p. 271.

Eastman, C. R. 1899 E, p. 399.

Giebel, C. G. 1848 A, p. 203.

Kner, R. 1866 B, p. 324.

1866 C, p. 32.

Lütken, C. 1873 A, p. 324.

Quenstedt, F. A. 1852 A, p. 207.

1885 A, p. 319.

Vetter, B. 1881 A, p. 58.

Wagner, A. 1863 A, p. 27.

Woodward, A. S. 1890 D, p. 43.

1895 A, p. 447.

1895 D.

1898 B, p. 114.

Woodward and Sherborn 1890 A, p. 146.

Zittel, K. A. 1890 A, p. 213.

Pholidophorus americanus Eastman.

Eastman, C. R. 1899 A, p. 642.

1899 E, p. 398, pls. xlv-xlvii.

Jurassic; South Dakota.

CHIROCENTRIDÆ.

Günther, A. 1868 A, p. 475.

Cope, E. D. 1870 L. (Saurodontidæ.)

1871 D, p. 414. (Saurodontidæ.)

1872 F, p. 337. (Saurodontidæ.)

1872 I, p. 327. (Saurodontidæ.)

1875 E, p. 183. (Saurodontidæ.)

1877 G, p. 588. (Saurodontidæ.)

1888 V, p. 1019. (Saurocephalidæ.)

1892 V. (Saurocephalidæ.)

Crook, A. R. 1892 A, pp. 111, 121. (Ichthyodectidæ.)

Cuvier and Valenciennes, 1846, Hist. Nat. Poissons, xix, p. 150. ("Chirocentres.")

Günther, A. 1880 A, p. 663.

Loomis, F. B. 1900 A, p. 236.

Nicholson and Lydekker 1889 A, p. 998. (Saurocephalidæ.)

Reis, O. M. 1895 C, p. 182. (Ichthyodectidæ.)

Steinmann and Döderlein 1890 A, p. 580. (Saurocephalidæ.)

Stewart, A. 1898 A, p. 21. (Saurodontidæ.)

1898 C, p. 179. (Saurodontidæ.)

1899 C, p. 107. (Saurodontidæ.)

1900 A, p. 262 (Ichthyodectidæ); p. 310 (Saurodontidæ.)

Woodward, A. S. 1898 B, p. 118. (Saurodontidæ or Ichthyodectidæ.)

Zittel, K. A. 1890 A (1888), p. 262. (Saurocephalidæ.)

ICHTHYODECTINÆ.

Crook, A. R. 1892 A, pp. 111, 121. (Ichthyodectidæ, part.)

Stewart, A. 1899 C, p. 107. (Ichthyodectidæ.)

1900 A, p. 262. (Ichthyodectidæ.)

PORTHEUS Cope. Type *P. molossus* Cope.

Cope, *E. D.* 1871 K, p. 175.

1872 F, pp. 339, 341.

1872 I, pp. 330, 331.

1873 N, p. 338.

1874 C, p. 39.

1875 E, pp. 184, 189, 204, 273, pl. lv, fig. 1.

1892 V.

Crook, A. R. 1892 A, pp. 114, 122.

Günther, A. 1880 A, p. 500.

Hay, O. P. 1898 B, p. 646. (Xiphactinus.)

1898 D, p. 25, figs. 1-16. (Xiphactinus.)

? Leidy, J. 1870 H, p. 12. (Xiphactinus; type *X. audax*.)

Loomis, F. B. 1900 A, p. 246.

Newton, E. T. 1877 A.
1878 B.

Nicholson and Lydekker 1889 A, p. 998.
Stewart, A. 1898 B, p. 115. (Xiphactinus.)

1898 C, pp. 180, 184. (Xiphactinus.)

1899 A, p. 19. (Xiphactinus.)

1899 C, p. 107. (Xiphactinus.)

1900 A, p. 265. (Xiphactinus.)

Woodward, A. S. 1888 I, p. 310.

1898 B, p. 118.

Zittel, K. A. 1890 A, p. 262.

Portheus ? audax (Leidy).

Leidy, J. 1870 H, p. 12. (Xiphactinus.)

Cope, E. D. 1870 L, p. 533. (Saurocephalus.)

1871 D, pp. 415, 418. (Saurocephalus.)

1872 F, pp. 341, 348. (? Xiphactinus.)

1875 E, p. 276. (Xiphactinus.)

1898 A (1870), p. 29. (X. audax = Saurocephalus thauas.)

Hay, O. P. 1898 D, p. 27. (Xiphactinus.)

Leidy, J. 1873 B, pp. 290, 348, pl. xvii, figs. 9, 10. (Xiphactinus.)

Stewart, A. 1898 B, p. 115, figures.

1900 A, p. 267, pls. xxxiii-xlvii (in part?).

Cretaceous (Niobrara); Kansas.

Probably identical with one of the other species of *Portheus*, but it may also belong to some other genus.

Portheus brachygnathus (Stewart).

Stewart, A. 1898 B. (Xiphactinus.)

1899 C, p. 107. (Xiphactinus.)

1900 A, p. 293, pl. xlvii, figs. 3, 4. (Xiphactinus.)

Cretaceous (Niobrara); Kansas.

Portheus lestrius Cope.

Cope, E. D. 1873 N, p. 338.

1875 E, pp. 201, 274, pls. xlii, figs. 1-3; xlvii, fig. 1.

Crook, A. R. 1892 A, p. 123.

Hay, O. P. 1898 D, pp. 27, 52. (Xiphactinus.)

Stewart, A. 1898 B, p. 118, footnote. (Xiphactinus.)

Newton, E. T. 1877 A, p. 509.

Cretaceous (Niobrara); Kansas.

Portheus lowii Stewart.

Stewart, A. 1898 A, p. 24, pl. ii, fig. 2.

Hay, O. P. 1898 D, p. 27. (Xiphactinus.)

Stewart, A. 1900 A, p. 293, pl. xlviii, fig. 2. (Xiphactinus.)

Cretaceous (Benton); Kansas.

Portheus molossus Cope.

Cope, E. D. 1871 K, p. 175.

1872 F, pp. 324, 338, 342.

1872 I, pp. 328, 333.

1874 C, p. 39.

1875 E, pp. 50, 183, 273, pls. xxxix, xl, figs.

1-9; xli; xlv, figs. 5, 10, 11; xlv, figs. 9-11;

Crook, A. R. 1892 A, pp. 114, 122, pl. xviii.

Hay, O. P. 1898 D, pp. 35, 52, figs. 3, 6, 8. (Xiphactinus.)

Newton, E. T. 1877 A, p. 509.

Stewart, A. 1898 B, p. 116, figs. (Syn. of Xiphactinus audax.)

1900 A, p. 267, part? of pls. xxxiii-xlvii.

(Xiphactinus audax.)

Zittel, K. A. 1890 A, p. 263, fig. 268.

Cretaceous (Niobrara); Kansas.

Portheus mudgei Cope.

Cope, E. D. 1874 C, p. 40.

1875 E, pp. 203, 274.

Crook, A. R. 1892 A, p. 123, pl. xxxix.

Hay, O. P. 1898 D, pp. 27, 52. (Xiphactinus.)

Newton, E. T. 1877 A, p. 509.

Cretaceous (Niobrara); Kansas.

Portheus thauas Cope.

Cope, E. D. 1870 L, p. 533. (Saurocephalus.)

1871 D, pp. 418, 422. (Saurocephalus.)

1872 F, p. 342.

1872 I, pp. 333, 335.

1874 C, p. 40.

1875 E, pp. 196, 273, pl. xliii, figs. 1-4; xlv, figs. 1-4.

Crook, A. R. 1892 A, p. 123.

Hay, O. P. 1898 D, p. 27, figs. 2, 7, 10-12, 15, 16.

Newton, E. T. 1877 A, p. 509. (Xiphactinus.)

Osborn, Scott and Speir 1878 A, p. 99. (Identification doubtful.)

Stewart, A. 1898 B, p. 116, figs. (Syn. of Xiphactinus audax.)

1900 A, p. 267, part? of pls. xxxiii-xlvii.

(Xiphactinus audax.)

Cretaceous (Niobrara); Kansas, Colorado?

ICHTHYODECTES Cope. Type *I. clenodon* Cope.

Cope, E. D. 1870 L, p. 536.

1871 D, p. 421.

1872 F, pp. 340, 343.

1872 I, pp. 330, 338.

1875 E, pp. 189, 205, 275.

1892 V.

Crook, A. R. 1892 A, p. 111.

Loomis, F. B. 1900 A, p. 236.

Newton, E. T. 1877 A, p. 520.

1878 B.

Nicholson and Lydekker 1889 A, p. 998.

Stewart, A. 1898 C, p. 180.

1899 A, p. 20.

1900 A, p. 205.

Woodward, A. S. 1888 I, p. 311.

Woodward, A. S. 1898 B, p. 118.

Zittel, K. A. 1890 A, p. 263.

Ichthyodectes acanthicus Cope

Cope, E. D. 1877 D, p. 177.

Hay, O. P. 1898 E, p. 227.

Stewart, A. 1900 A, p. 301.

Cretaceous (Niobrara); Kansas.

Ichthyodectes anaides Cope.

Cope, E. D. 1872 I, p. 339.

1872 I, p. 343.

1874 C, p. 40.

1875 E, pp. 206, 274, pl. xlv, figs. 14, 15; pl.

xl, figs. 1-8.

- Crook, A. R. 1892 A, pp. 111, 123, pl. xv.
 Hay, O. P. 1898 E, p. 226, fig. 2.
 Loomis, F. B. 1900 A, p. 244.
 Stewart, A. 1900 A, p. 296, pl. xlix, figs. 1-3.
 Cretaceous (Niobrara); Kansas.

Ichthyodectes cruentus Hay.

- Hay, O. P. 1898 E, p. 225, figs. 1, 3, 4.
 Stewart, A. 1900 A, p. 300, pl. 1, figs. 8-10b.
 Cretaceous (Niobrara); Kansas.

Ichthyodectes ctenodon Cope.

- Cope, E. D. 1870 L, p. 536.
 1871 D, p. 421.
 1872 F, p. 343.
 1872 I, pp. 339, 340, 345.
 1874 C, p. 40.
 1875 E, pp. 207, 241, 274, pl. xlvii, figs. 1-4.
 Crook, A. R. 1892 A, p. 123.
 Hay, O. P. 1898 E, p. 226.
 Loomis, F. B. 1900 A, p. 244, pl. xxiii, figs. 7, 8.
 Stewart, A. 1900 A, p. 303, pl. xlix, figs. 5-7; pl. li, figs. 12, 13.
 Cretaceous (Niobrara); Kansas.

Ichthyodectes goodeanus Cope.

- Cope, E. D. 1877 D, p. 176.
 Hay, O. P. 1898 A, p. 227.
 Cretaceous (Niobrara); Kansas.

Ichthyodectes hamatus Cope.

- Cope, E. D. 1872 I, pp. 339, 340.
 1872 F, p. 343.

- Cope, E. D. 1874 C, p. 40.
 1875 E, pp. 209, 274, pl. xlvii, fig. 5.
 Crook, A. R. 1892 A, p. 123.
 Hay, O. P. 1898 E, pp. 225, 226.
 Loomis, F. B. 1900 A, p. 243, pl. xxiii, figs. 9a, 9b.
 Stewart, A. 1900 A, p. 298, pl. xlviii, fig. 2; pl. 1, figs. 1-7.
 Cretaceous (Niobrara); Kansas.

Ichthyodectes multidentatus Cope.

- Cope, E. D. 1872 I, pp. 339, 342.
 1872 F, p. 343.
 1874 C, p. 41.
 1875 E, pp. 212, 275, pl. 1, figs. 6, 7
 Crook, A. R. 1892 A, p. 123.
 Hay, O. P. 1898 E, p. 227.
 Loomis, F. B. 1900 A, p. 243.
 Cretaceous (Niobrara); Kansas.

Ichthyodectes parvus Stewart.

- Stewart, A. 1900 A, p. 302, pl. li, figs. 1-11 (I. acanthicus, not of Cope); p. 302 (I. parvus).
 Cretaceous (Niobrara); Kansas.

Ichthyodectes prognathus Cope.

- Cope, E. D. 1870 L, p. 532. (Saurocephalus.)
 1871 D, p. 417. (Saurocephalus.)
 1872 F, pp. 340, 343.
 1872 I, p. 340.
 1874 C, p. 41.
 1875 E, pp. 210, 274, pl. xlvii, figs. 6-10.
 Crook, A. R. 1892 A, p. 123.
 Hay, O. P. 1898 E, p. 226.
 Cretaceous (Niobrara); Kansas.

SAUROCEPHALINÆ.

- Stewart, A. 1899 C, p. 107. (Saurodontidæ.) [Stewart, A. 1900 A, p. 310. (Saurodontidæ.)

SAUROCEPHALUS Harlan. Type *S. lanciformis* Harlan, not of Agassiz.

- Harlan, R. 1824 A.
 Agassiz, L. 1843 B (1844), v, p. 101. (In part.)
 Cope, E. D. 1870 L, pp. 529, 530.
 1870 P.
 1871 A.
 1871 D, p. 415.
 1872 F, pp. 340, 343.
 1872 I, pp. 330, 342.
 1873 N, p. 339. (Daptinus, with *S. phleboto-*
mus as type.)
 1875 E, pp. 189, 215, 275. (Saurodon.)
 1888 V. (Saurodon.)
 1892 V. (Saurodon.)
 1898 A.
 Crook, A. R. 1892 A, p. 120.
 Davies, W. 1878 A.
 Giebel, C. G. 1848 A, p. 88.
 Harlan, R. 1834 B, p. 85. (Saurodon.)
 1835 B, p. 286.
 1835 B, p. 288. (Saurodon.)
 1835 H.
 Hay, O. P. 1899 B, p. 302.
 Hays, I. 1830 A. (Saurodon, with *S. leanus* as type.)
 Kramberger, D. 1881 A.
 Leidy, J. 1856 O, p. 302.
 Leidy, J. 1857 I, p. 95.
 Loomis, F. B. 1900 A, p. 247 (Saurodon); p. 249 (Saurocephalus).
 Newton, E. T. 1878 A.
 1878 B. (Daptinus.)
 Nicholson and Lydekker 1889 A, p. 998 (Saurocephalus); p. 999 (Saurodon).
 Owen, R. 1845 B, p. 130.
 Pictet, F. J. 1854 A, p. 93 (Saurocephalus); p. 94 (Saurodon).
 Stewart, A. 1898, A, p. 22. (Saurodon, Daptinus, Saurocephalus.)
 1898 C. (Saurodon, Saurocephalus.)
 1900 A, p. 311 (Saurodon); p. 323 (Saurocephalus).
 Woodward, A. S. 1888 I, p. 312. (Daptinus.)
 Zittel, K. A. 1890 A, p. 264.
Saurocephalus arapahovius Cope.
 Cope, E. D. 1872 I, p. 343.
 1872 F, pp. 344, 348.
 1874 C, p. 41.
 1875 E, pp. 216, 275; pl. xlix, fig. 5.
 Loomis, F. B. 1900 A, p. 251. (*S. arapahovius*, syn. of *S. lanciformis*.)

Newton, E. T. 1878 A.

Stewart, A. 1898 C, p. 186.

1900 A, p. 323.

Cretaceous (Niobrara); Kansas.

Saurocephalus broadheadi (Stewart.)

Stewart, A. 1898 A, p. 24, pl. ii, figs. 1a-1c. (Daptinus.)

Loomis, F. B. 1900 A, p. 252, pl. xxiv, fig. 6; pl. xxv, fig. 1.

Stewart, A. 1898 C, p. 186. (Saurodon.)

1900 A, p. 313, pl. xlviii, figs. 1a-1c.

Cretaceous (Niobrara); Kansas.

Saurocephalus dentatus Stewart.

Stewart, A. 1898 A, p. 25, pl. i, figs. 3a, 3b.

Loomis, F. B. 1900 A, p. 251. (Syn. of *S. lanciformis*.)

Stewart, A. 1898 C, p. 186.

1900 A, p. 323, pl. lviii, figs. 3, 4.

Cretaceous (Niobrara); Kansas.

Saurocephalus ferox (Stewart.)

Stewart, A. 1898 C, p. 183, pl. xv; pl. xvi, figs. 1-3. (Saurodon.)

1900 A, p. 319, pls. lvi, lvii. (Saurodon.)

Cretaceous (Niobrara); Kansas.

Saurocephalus lanciformis Harlan.

Harlan, R. 1824 A, pl. xii. (Not of Agassiz, L. 1844 A.)

Cope, E. D. 1870 L, p. 530.

1871 D, p. 415.

1875 E, pp. 216, 275.

Davies, W. 1878 A, p. 260.

Giebel, C. G. 1848 A, p. 89.

Harlan, R. 1834 B, p. 83.

1835 B, pp. 286, 289.

1835 H.

Hay, O. P. 1899 B, p. 299, figs. 1-4.

Hays, I. 1830 A, p. 477, pl. xvi, fig. 11.

Hilgard, E. W. 1860 A, pp. 142, 389.

Leidy, J. 1856 O, p. 302.

1857 I, pl. vi, figs. 8-11.

Loomis, F. B. 1900 A, p. 251, pl. xxv, figs. 2-5.

Morton, S. G. 1835 A, p. 277.

Newton, E. T. 1878 A.

Owen, R. 1845 B, p. 130, pl. lv.

Pictet, F. J. 1854 A, p. 93.

Stewart, A. 1898 C, p. 186.

Cretaceous (Niobrara); Nebraska, Kansas.

GILLICUS Hay. Type *Ichthyodectes arcuatus* Cope.

Hay, O. P. 1898 E, p. 230.

Loomis, F. B. 1900 A, p. 237. (Syn. of *Ichthyodectes*.)

Stewart, A. 1900 A, p. 304.

Gillicus arcuatus (Cope).

Cope, E. D. 1875 E, pp. 193, 201, 274, pl. xlvii, figs. 7-9. (Portheus; the figures probably not belonging to this species.)

1877 D, p. 177. (Ichthyodectes.)

1892 V, p. 942.

Saurocephalus leanus (Hays).

Hays, I. 1830 A, p. 477, pl. xvi, figs. 1-10. (Saurodon.)

Agassiz, L. 1844 A, p. 205. (Cimolichthys levisiensis, in part.)

Cope, E. D. 1870 L, p. 531. (Saurodon.)

1871 D, p. 421. (Saurodon.)

1875 E, p. 275. (Saurodon.)

Davies, W. 1878 A, p. 260.

Giebel, C. G. 1848 A, p. 89. (Saurodon.)

Harlan, R. 1834 B, p. 83.

1835 B, p. 287 (*S. leanus*); p. 288 ("*S. leae*").

Leidy, J. 1856 O, p. 302.

1857 I, pl. vi, figs. 12-15.

Morton, S. G. 1835 A, p. 277.

Newton, E. T. 1878 A.

Woodward, A. S. 1888 B.

Zittel, K. A. 1890 A, p. 264.

Cretaceous; New Jersey.

Saurocephalus pamphagus Hay.

Hay, O. P. 1899 B, p. 303, fig. 5.

Cretaceous (Niobrara); Kansas.

Saurocephalus phlebotomus Cope.

Cope, E. D. 1870 L, p. 530.

1871 D, p. 416.

1872 I, p. 343. (Saurodon.)

1873 N, p. 339. (Daptinus.)

1874 C, p. 41. (Daptinus.)

1875 E, pp. 213, 275, pl. xlvii, figs. 3, 4, 6; pl. xlix, figs. 1-4. (Daptinus.)

1877 G, p. 588. (Saurodon.)

1888 V.

1892 V.

Crook, A. R. 1892 A, pp. 120, 123.

Loomis, F. B. 1900 A, p. 248, pl. xxiv, figs. 1-5. (Saurodon.)

Newton, E. T. 1878 B.

Stewart, A. 1898 C, p. 186. (Saurodon.)

1900 A, p. 312, pl. lvii, figs. 4, 5. (Saurodon.)

Zittel, K. A. 1890 A, p. 264. (Daptinus.)

Cretaceous (Niobrara); Kansas.

Saurocephalus pygmæus (Loomis).

Loomis, F. B. 1900 A, p. 218, pl. xxiii, fig. 10. (Saurodon.)

Cretaceous (Niobrara); Kansas.

Saurocephalus xiphirostris (Stewart).

Stewart, A. 1898 C, p. 179, pl. xiv. (Saurodon.)

1900 A, p. 314, pl. lv. (Saurodon.)

Cretaceous (Niobrara); Kansas.

Crook, A. R. 1892 A, p. 112, pl. xvi (*I. polymicrodus*); p. 123 (*Portheus*).

Hay, O. P. 1898 D, pp. 30, 42. (*I. arcuatus*, *I. polymicrodus*.)

1898 E, pp. 228, 230. (*G. arcuatus*, *G. polymicrodus*.)

Loomis, F. B. 1900 A, p. 242, pl. xxiii, figs. 1-6, text fig. 7. (*Ichthyodectes occidentalis*.)

Newton, E. T. 1877 A, p. 509.

Stewart, A., p. 307, pls. lii-liv.

Cretaceous (Niobrara); Kansas.

STRATODONTIDÆ.

Cope, E. D. 1872 I, p. 348.

1872 F, p. 345.

1872 I, p. 343. (Pachyrhizodontidæ, part.)

1875 E, p. 218.

Crook, A. J. 1892 A, p. 109.

Nicholson and Lydekker 1889 A, p. 998. (Pachyrhizodontidæ, part.)

Reis, O. M. 1895 C, p. 170.

Stewart, A. 1900 A, p. 326.

Zittel, K. A. 1890 A, p. 268.

STRATODUS Cope. Type *S. apicalis* Cope.

Cope, E. D. 1872 I, p. 348.

1872 F, pp. 345, 346.

1875 E, pp. 219, 226.

Reis, O. M. 1895 C, p. 170.

Stewart, A. 1900 A, p. 327.

Woodward, A. S. 1888 I, p. 314.

Zittel, K. A. 1890 A, p. 269.

Stratodus apicalis Cope.

Cope, E. D. 1872 I, p. 349.

Cope, E. D. 1872 F, pp. 346, 348.

1874 C, p. 47.

1875 E, pp. 227, 279, pl. xlix, figs. 6-8.

Stewart, A. 1900 A, p. 328, pl. lx; pl. lxi, fig. 1.

Cretaceous (Niobrara); Kansas.

Stratodus oxypogon Cope.

Cope, E. D. 1877 D, p. 180.

Cretaceous (Niobrara); Kansas.

EMPO Cope. Type *E. nepaholica* Cope.

Cope, E. D. 1872 I, p. 347.

1872 F, p. 345.

1872 I, p. 348. (Cimolichthys.)

1874 C, p. 45.

1875 E, pp. 219, 228, 279.

Loomis, F. B. 1900 A, p. 267. (Syn. of Cimolichthys.)

Nicholson and Lydekker 1889 A, p. 999.

Stewart, A. 1900 A, p. 330.

Zittel, K. A. 1890 A, p. 268.

Empo contracta Cope.

Cope, E. D. 1874 C, p. 46.

1875 E, pp. 232, 279, pl. liii, figs. 14-17.

Loomis, F. B. 1900 A, p. 273, pl. xxvii, figs. 8, 9. (Cimolichthys.)

Stewart, A. 1900 A, p. 339.

Cretaceous (Niobrara); Kansas.

Empo lisbonensis Stewart.

Stewart, A. 1899 C, p. 111.

Loomis, F. B. 1900 A, p. 222. (Syn. of *E. merrillii*.)

Stewart, A. 1900 A, p. 337, pl. lxi, figs. 10a, 10b.

Cretaceous (Pierre); Kansas.

Empo merrillii Cope.

Cope, E. D. 1874 C, p. 46.

Cope, E. D. 1875 E, pp. 232, 279, pl. liii, figs. 10-13.

Loomis, F. B. 1900 A, p. 271, pl. xxvii, fig. 7.

(Cimolichthys.)

Cretaceous (Niobrara); Kansas.

Empo nepaholica Cope.

Cope, E. D. 1872 I, p. 347.

1872 F, p. 345.

1872 I, p. 351. (Cimolichthys sulcata.)

1874 C, p. 46. (*E. sulcata*, *E. nepæolica*.)

1875 E, pp. 230, 279, pls. xlix, fig. 9; pl. l, fig.

8; lii, fig. 1; liii, figs. 3-5. (*E. nepæolica*.)

Loomis, F. B. 1900 A, p. 271, pl. xxvii, figs. 1-3.

(Cimolichthys nepæolica.)

Stewart, A. 1900 A, p. 332. (*E. nepæolica*.)

Cretaceous (Niobrara); Kansas.

Empo semianiceps Cope.

Cope, E. D. 1872 I, p. 351. (Cimolichthys.)

1872 F, p. 326. (Cimolichthys.)

1874 C, p. 46.

1875 E, pp. 233, 279, pl. liii, figs. 1, 2, 6-9.

Loomis, F. B. 1900 A, p. 273, pl. xxvii, figs. 4-6.

(Cimolichthys.)

Stewart, A. 1900 A, p. 338, pl. lxi, figs. 6-9.

Cretaceous (Niobrara); Kansas.

PACHYRHIZODONTIDÆ.

Cope, E. D. 1872 I, p. 343.

1872 F, p. 344.

Loomis, F. B. 1900 A, p. 258. (Salmonidæ, part.)

Nicholson and Lydekker 1889 A, p. 998.

Stewart, A. 1900 A, p. 349. (Salmonidæ, part.)

PACHYRHIZODUS Agassiz.

Type *A. basalis* Agassiz.

Agassiz, L., 1850, Dixon's Geol. Sussex, p. 374.

Cope, E. D. 1872 F, p. 344.

1872 I, p. 344.

1875 E, pp. 219, 220, 276.

1887 D, p. 177.

Loomis, F. B. 1900 A, p. 258.

Nicholson and Lydekker 1889 A, p. 999.

Pictet, F. J. 1854 A, p. 94.

Reis, O. M. 1895 C, p. 170.

Stewart, A. 1900 A, p. 349.

Woodward, A. S. 1888 I, p. 313.

Zittel, K. A. 1890 A, p. 268.

Pachyrhizodus caninus Cope.

Cope, E. D. 1872 I, p. 344.

1872 F, p. 348.

Cope, E. D. 1874 C, p. 42.

1875 E, pp. 221, 276, pl. 1, figs. 1-4.

Crook, A. J. 1892 A, p. 109.

Loomis, F. B. 1900 A, p. 262, pl. xxvii, figs. 10-12.

Stewart, A. 1900 A, p. 355, pl. lxx, figs. 3-6.

Cretaceous (Niobrara); Kansas.

Pachyrhizodus curvatus Loomis.

Loomis, F. B. 1900 A, p. 264 (P. recurvatus); p. 265, pl. xxv, figs. 6-8 (P. curvatus).

Cretaceous (Niobrara); Kansas.

Pachyrhizodus kingii Cope.

Cope, E. D. 1872 I, p. 346.

1872 F, p. 348.

1874 C, p. 42.

1875 E, pp. 223, 276, pl. xlvi, fig. 11.

Loomis, F. B. 1900 A, p. 263. (Syn. of P. latimentum.)

Cretaceous (Niobrara); Kansas.

Pachyrhizodus latimentum Cope.

Cope, E. D. 1872 I, p. 346.

1872 F, p. 348.

1874 C, p. 42.

1875 E, pp. 223, 276, pl. 1, fig. 5; pl. li, figs. 1-7.

Loomis, F. B. 1900 A, p. 263, pl. xxvi, figs. 7, 8.

CONOSAURUS Gibbes. Type *C. bowmani* Gibbes.

Gibbes, R. W. 1851 A, p. 9.

Cope, E. D. 1872 F, p. 345.

1875 E, p. 276.

Leidy, J. 1868 G, p. 202. (Conosaurops, to replace Conosaurus.)

Loomis, F. B. 1900 A, p. 261.

Zittel, K. A. 1890 A, p. 268. (Syn. of Pachyrhizodus.)

ORICARDINUS Cope. Type *O. tortus* Cope.

Cope, E. D. 1877 D, p. 177.

Oricardinus sheareri Cope.

Cope, E. D. 1872 I, p. 347. (Pachyrhizodus.)

1872 F, p. 348. (Pachyrhizodus.)

1874 C, p. 43. (Pachyrhizodus.)

1875 E, pp. 225, 276. (Pachyrhizodus.)

1877 D, p. 177. (Oricardinus.)

Loomis, F. B. 1900 A, p. 267. (Enchodidæ.)

Nicholson and Lydekker 1889 A, p. 997.

ENCHODUS Agassiz. Types *E. fawjasi* and *E. halocyon*.

Agassiz, L. 1843 B (1844), v, p. 64.

1844 A.

Cope, E. D. 1872 F, p. 347.

1872 I, p. 354.

1875 E, pp. 219, 238, 301 (Enchodus); pp. 219, 235, 277 (Phasganodus).

Dames, W. 1887 B, p. 71.

Davis, J. W. 1887 C, p. 521.

Dollo, L. 1892 B, p. 183.

Günther, A. 1880 A, p. 433.

Heckel, J. J. 1843 A, p. 240. (Isodus.)

Leidy, J. 1873 B, p. 289.

Stewart, A. 1900 A, p. 357, pl. lxxviii; pl. lxx, figs. 9, 10.

Cretaceous (Niobrara); Kansas.

Pachyrhizodus leptognathus Stewart.

Stewart, A. 1898 D, p. 193, pl. xvii, fig. 1.

Loomis, F. B. 1900 A, p. 264, pl. xxvi, figs. 10-16.

Stewart, A. 1900 A, p. 351, pl. lxix, fig. 1.

Cretaceous (Niobrara); Kansas.

Pachyrhizodus leptopsis Cope.

Cope, E. D. 1874 C, p. 42.

1875 E, pp. 225, 276, pl. li, figs. 8-8c.

Loomis, F. B. 1900 A, p. 264. (P. leptopsis.)

Stewart, A. 1900 A, p. 354, pl. lxx, fig. 1.

Cretaceous (Niobrara); Kansas.

Pachyrhizodus minimus Stewart.

Stewart, A. 1899 B, p. 37, figure.

1900 A, p. 361, text fig. 1.

Cretaceous (Niobrara); Kansas.

Pachyrhizodus velox Stewart.

Stewart, A. 1898 D, p. 193, pl. xvii, fig. 2.

Loomis, F. B. 1900 A, p. 265. (P. ferox.)

Stewart, A. 1900 A, p. 353, pl. xlix, fig. 9.

Cretaceous (Niobrara); Kansas.

Conosaurus bowmani Gibbes.

Gibbes, R. W. 1851 A, p. 10, pl. iii, figs. 1-5.

Cope, E. D. 1875 E, p. 276.

Gibbes, R. W. 1850 A. (Name only.)

Leidy, J. 1868 G, p. 202. (Conosaurops.)

Cretaceous (Greensand); New Jersey.

Loomis, F. B. 1900 A, p. 264. (Pachyrhizodus sheari.)

Cretaceous (Niobrara); Kansas.

Oricardinus tortus Cope.

Cope, E. D. 1877 D, p. 177.

Cretaceous (Niobrara); Kansas.

ENCHODONTIDÆ.

Loomis, F. B. 1900 A, p. 267. (Enchodidæ.)

Nicholson and Lydekker 1889 A, p. 997.

Stewart, A. 1900 A, p. 373.

Enchodus anceps Cope.

- Cope, E. D.* 1872 I, p. 352. (Cimolichthys.)
 1874 C, p. 44. (Enchodus?)
 1875 E, pp. 236, 277 (Phasganodus); p. 301 (Enchodus).
Loomis, F. B. 1900 A, p. 277.
 Cretaceous (Niobrara); Kansas.

Enchodus calliodon Cope.

- Cope, E. D.* 1872 I, p. 354.
 1872 F, pp. 347, 348.
 1874 C, p. 44.
 1875 E, pp. 240, 278, 301.
Loomis, F. B. 1900 A, p. 277.
 Cretaceous (Niobrara); Kansas.

Enchodus carinatus (Cope).

- Cope, E. D.* 1869 F, p. 241. (Sphyræna.)
 1871 D, p. 424. (Sphyræna.)
 1872 F, p. 347. (Cimolichthys.)
 1875 E, pp. 80, 235, 277. (Phasganodus.)
Loomis, F. B. 1900 A, p. 277.
 Cretaceous (Niobrara); Kansas.

Enchodus dolichus Cope.

- Cope, E. D.* 1875 E, pp. 239, 278, 300, pl. liv, figs. 8, 8a.
 1885 Z, p. 3.
Loomis, F. B. 1900 A, p. 279, pl. xxvii, figs. 16, 17.
Stewart, A. 1900 A, p. 377, pl. lxx, fig. 12.
 Cretaceous (Niobrara); Kansas.

Enchodus ferox Leidy.

- Leidy, J.* 1855 C, p. 397.
Cope, E. D. 1875 E, p. 277.
Emmons, E. 1860 A, p. 214, fig. 1824.
Loomis, F. B. 1900 A, p. 277.
Morton, S. G. 1834 A, p. 32, pl. xii, fig. 1. ("Sphyræna.")
 Cretaceous; New Jersey.

Enchodus gentryi (Cope).

- Cope, E. D.* 1875 H, p. 362. (Phasganodus.)
 Miocene; New Jersey.

Enchodus gladiolus Cope.

- Cope, E. D.* 1872 I, p. 353. (Cimolichthys.)
 1874 C, p. 43. (Phasganodus?)
 1875 E, pp. 235, 277 (Phasganodus); 301, pl. xlii, fig. 7 (Enchodus).
 Cretaceous (Niobrara); Kansas.

Enchodus oxytomus Cope.

- Cope, E. D.* 1875 E, p. 278.
Loomis, F. B. 1900 A, p. 277.
 Cretaceous; New Jersey.

Enchodus parvus Stewart.

- Stewart, A.* 1898 D, p. 192, text fig. 2.
Loomis, F. B. 1900 A, p. 280. (Syn. of *E. shumardii*.)
Stewart, A. 1900 A, p. 378, text fig.
 Cretaceous (Niobrara); Kansas.

Enchodus petrosus Cope.

- Cope, E. D.* 1874 C, p. 44.
 1875 E, pp. 239, 278, pl. liv, figs. 4-6.
Loomis, F. B. 1900 A, p. 278, pl. xxvii, figs. 13-15.
Stewart, A. 1900 A, p. 376, pl. lxx, fig. 11.
 Cretaceous (Niobrara) Kansas.

Enchodus pressidens Cope.

- Cope, E. D.* 1869 F, p. 241.
 1875 E, p. 277.
Loomis, F. B. 1900 A, p. 277.
 Cretaceous; New Jersey.

Enchodus semistriatus Marsh.

- Marsh, O. C.* 1870 E, p. 230.
Cope, E. D. 1875 E, p. 277. (Phasganodus.)
Loomis, F. B. 1900 A, p. 277.
 Cretaceous; New Jersey.)

Enchodus shumardii Leidy.

- Leidy, J. H.* 1856 M, p. 257.
Cope, E. D. 1874 C, p. 44.
 1875 E, p. 279.
Leidy, J. 1873 B, pp. 239, 347, pl. xvii, fig. 20.
Loomis, F. B. 1900 A, p. 280, pl. xxvii, figs. 18, 19.
Stewart, A. 1900 A, p. 375.
Whiteaves, J. F. 1889 B, p. 194, pl. xxvi, figs. 7 a, b, c.
 Cretaceous; Dakota, Manitoba.

Enchodus tetræcus Cope.¹

- Cope, E. D.* 1875 E, p. 278.
Loomis, F. B. 1900 A, p. 277 (E. tetræcus).
Stewart, A. 1900 A, p. 375. (E. tetræcus).
 Cretaceous; Delaware, New Jersey.

Enchodus sp. indet.

- Cope, E. D.* 1871 D, p. 424.
 Cretaceous (Niobrara); Kansas.

TETHEODUS Cope. Type *T. pephredo* Cope.

- Cope, E. D.* 1874 C, p. 43.
 1875 E, pp. 219, 237, 277.
Loomis, F. B. 1900 A, p. 273. (Syn. of *Enchodus*.)
Zittel, K. A. 1890 A, p. 270.

Tetheodus pephredo Cope.

- Cope, E. D.* 1874 C, p. 43.

- Cope, E. D.* 1875 E, pp. 237, 277, pl. liv, figs. 1-3.
Loomis, F. B. 1900 A, p. 278. (T. pephredo; syn. of *Enchodus petrosus*.)
 Cretaceous (Niobrara); Kansas.

¹ Agassiz (1843 B (1844), v, p. 65, pl. xxv c, figs. 1, 2; pl. xxxiii, figs. 2-4) reports *E. halocyon* from Cretaceous of Maryland. Its original locality is Europe. The determination was probably erroneous.

CIMOLICHTHYS Leidy. Type *C. lewesiensis* Leidy.

Leidy, J. 1856 O, p. 302.

Agassiz, L. 1843 B. v, pt. i, p. 102. (Saurocephalus, Saurodon, not of Harlan and Hays.)

Cope, E. D. 1870 L, p. 530.

1871 D, p. 415.

1872 F, p. 346.

1875 E, pp. 219, 235, 277, 300. (Phasganodus, in part.)

Dames, W. 1887 A. (Phasganodus=Saurodon Agassiz.)

Dixon, F. 1878 A, p. 411.

Leidy, J. 1857 F, p. 167. (Phasganodus, type *P. dirus*.)

1873 B, p. 347. (Phasganodus.)

Loomis, F. B. 1900 A, p. 267.

Woodward, A. S. 1888 I, p. 316.

Zittel, K. A. 1890 A, p. 269 (Cimolichthys); p. 270 (Phasganodus).

Cimolichthys dirus (Leidy.)

Leidy, J. 1857 F, p. 167. (Phasganodus.)

Cope, E. D. 1874 C, p. 43. (Phasganodus.)

1875 E, p. 277. (Phasganodus.)

Dames, W. 1887 A, p. 74. (Saurodon.)

Leidy, J. 1873 B, pp. 289, 347, pl. xvii, figs. 23, 24. (Phasganodus.)

Stewart, A. 1900 A, p. 376, pl. lxx, fig. 14. (Enchodus.)

Cretaceous (Fox Hills); North Dakota.

ALBULIDÆ.

Günther, A. 1868 A, pp. 468, 469. (Albulina.)

Jordan and Evermann 1896 A, p. 410.

Loomis, F. B. 1900 A, p. 252.

SYNTEGMODUS Loomis. Type *S. altus* Loomis.

Loomis, F. B. 1900 A, p. 252.

Syntegmodus altus Loomis.

Loomis, F. B. 1900 A, p. 253, pl. xxii, fig. 9.

Cretaceous (Niobrara); Kansas.

APSOPELIX Cope. Type *A. sauriformis* Cope.

Cope, E. D. 1871 D, p. 423.

1875 E, p. 211.

Zittel, K. A. 1890 A, p. 312.

A genus of uncertain position.

Apsopelix sauriformis Cope.

Cope, E. D. 1871 D, p. 424.

1874 C, p. 47.

1875 E, pp. 242, 279, pl. xlii, fig. 6.

Cretaceous (Benton); Kansas.

CYCLOTOMODON Cope. Type *C. vagrans* Cope.

Cope, E. D. 1876 F, p. 113.

Systematic position doubtful.

Cyclotomodon vagrans Cope.

Cope, E. D. 1876 F, p. 113.

Phosphate deposit; South Carolina.

CLUPEIDÆ.

Agassiz, L. 1843 B (1844), v, p. 96. ("Halécoides," in part.)

1845 A, p. 292.

Bridge, T. W. 1896 A, p. 557.

Brühl, B. C. 1847 A. ("Clupeen.")

Cope, E. D. 1872 C, p. 333.

1881 O, p. 67.

Darrest, C. 1872 A, p. 1087.

Grassi, B. 1883 A.

Günther, A. 1868 A, p. 381.

1880 A, p. 655.

1881 A, p. 693.

Hitchcock, Fanny R. 1888 B.

Jordan, D. S. 1891 A.

Jordan and Evermann 1896 A, p. 417.

Klein, E. F. 1879 A, p. 106.

Klein, E. F. 1886 A.

Kölliker, A. 1859 A. (Clupeinæ.)

Marck, W. 1863 A, p. 41. (Clupeoidei.)

Müller, J. 1846 C, p. 790.

Nicholson and Lydekker 1889 A, p. 994.

Owen, R. 1845 B, p. 135.

1866 A, p. 10, *et seq.*

Parker, W. K. 1868 A, p. 56.

Quenstedt, F. A. 1885 A, p. 367. (Clupacci.)

Stannius, H. 1846 A. ("Clupeiden.")

1851 A.

Steinmann and Döderlein 1890 A, p. 579.

Stephan, P. 1900 A. ("Clupéidés.")

Vaillant, L. 1883 A.

Vrolik, A. J. 1873 A, p. 267.

Zittel, K. A. 1890 A, p. 271.

DIPLOMYSTUS Cope. Type *D. dentatus* Cope.

Cope, E. D. 1877 I, p. 808.

A few references are here included to the literature of the genus *Clupea*, which is closely related to *Diplomystus* and to which most of the species of the latter were originally assigned.

Agassiz L. 1843 B (1844), v, p. 115. (Clupea.)

Cope, E. D. 1884 O, p. 73.

1885 Z, p. 4.

Günther, A. 1868 A, p. 412. (Clupea.)

Jordan and Evermann 1896 A, p. 421. (Clupea.)

Müller, J. 1843 A, p. 216.

Nicholson and Lydekker 1889 A, p. 996.

Pictet, F. J. 1854 A, p. 113. (Clupea.)

Quenstedt, F. A. 1885 A, p. 367. (Clupea.)

Reis, O. M. 1895 C, p. 167. (Clupea.)

Woodward, A. S. 1895 C, p. 1.

Zittel, K. A. 1890 A, p. 276. (Clupea, *Diplomystus*.)

***Diplomystus altus* (Leidy).**

Leidy, J. 1873 B, pp. 196, 347, pl. xvii, fig. 2. (Clupea.)

Cope, E. D. 1877 I, p. 811.

1877 Z, p. 570.

1877 AA.

1884 O, p. 79.

King, C. 1878 A, p. 394. (Clupea.)

Eocene (Green River); Wyoming.

***Diplomystus analis* Cope.**

Cope, E. D. 1877 I, p. 809.

1877 Z, p. 570.

1877 AA.

1884 O, p. 75, pl. vii, fig. 4; pl. viii, fig. 3;

pl. x, fig. 2.

Eocene (Green River); Wyoming.

***Diplomystus dentatus* Cope.**

Cope, E. D. 1877 I, p. 808.

1877 Z, p. 570.

1877 AA.

1884 O, p. 74, pl. x, fig. 1.

Eocene (Green River); Wyoming.

***Diplomystus humilis* (Leidy).**

Leidy, J. 1856 M, p. 256. (Clupea.)

Cope, E. D. 1870 H, p. 382. (Clupea pusilla, C. humilis.)

1871 E, p. 429. (Clupea pusilla, C. humilis.)

1877 I, p. 811.

1877 Z, p. 570.

1877 AA.

1884 O, p. 77, pl. ix, fig. 8; pl. x, fig. 4.

King, C. 1878 A, p. 394. (Clupea humilis, C. pusilla.)

Leidy, J. 1871 C, p. 369. (Clupea humilis, C. pusilla.)

1872 B, pp. 353, 372. (Clupea.)

1873 B, pp. 195, 347, pl. xvii, fig. 1. (Clupea.)

Eocene (Green River); Wyoming.

***Diplomystus pectorosus* Cope.**

Cope, E. D. 1877 I, p. 810.

1877 Z, p. 570.

1877 AA.

1884 O, p. 76, pl. x, fig. 3.

Eocene (Green River); Wyoming.

***Diplomystus theta* Cope.**

Cope, E. D. 1874 D, p. 51. (Clupea.)

1874 B, p. 461. (Clupea.)

1877 Z, p. 570.

1884 O, p. 77.

Eocene (Green River); Wyoming.

SPANIODON Pictet. Type *S. blondellii* Pictet.

Pictet, F. J., 1850, Poiss. foss. du Liban, p. 34.

Cope, E. D. 1878 F, p. 69.

1878 H H, p. 57.

Davis, J. W. 1887 C, p. 587.

Pictet, F. J. 1854 A, p. 115.

Zittel, K. A. 1890 A, p. 274.

***Spaniodon simus* Cope.**

Cope, E. D. 1878 F, p. 69.

Cretaceous (Niobrara); S. Dakota.

SARDINIUS Marck. Type *Osmerus cordieri* Agassiz.

Marck, W., 1858, Zeitschr. deutsch. geol. Gesellsch., x, p. 245.

Cope, E. D. 1878 A, p. 70.

Davis, J. W. 1887 C, p. 567.

Marck, W. 1863 A, p. 43.

Zittel, K. A. 1890 A, p. 275.

***Sardinus lineatus* Cope.**

Cope, E. D. 1878 F, p. 71.

Cretaceous (Niobrara); S. Dakota.

***Sardinus nasutulus* Cope.**

Cope, E. D. 1878 F, p. 70.

Cretaceous (Niobrara); S. Dakota.

***Sardinus percrassus* Cope.**

Cope, E. D. 1878 F, p. 72.

Cretaceous (Niobrara); S. Dakota.

***Sardinus? Blackburnii* Cope.**

Cope, E. D. 1891 H, p. 654.

1892 B.

Oligocene?; S. Dakota.

SALMONIDÆ.

- Agassiz, L. 1843 B (1844), v, p. 96. (Halécoides, in part.)
 1845 A, p. 306.
 Bridge, T. W. 1896 A, p. 550.
 Bruch, 1862, Osteol. Rheinlachs.
 Brühl, B. C. 1847 A.
 Cope, E. D. 1872 C, p. 333.
 Dareste, C. 1872 A, p. 1175.
 Gill, T. 1894 C, p. 117.
 Grassi, B. 1883 A.
 Günther, A. 1866 A, p. 1.
 1880 A, p. 630.
 1881 A, p. 693.
 Jordan and Evermann 1896 A, p. 460 (Salmonidæ);
 p. 519 (Argentinidæ).
 Klein, E. F. 1879 A, p. 107.
- Kölliker, A. 1859 A. (Salmones.)
 Müller, J. 1843 A, p. 214. (Salmones.)
 Nicholson and Lydekker 1889 A, p. 994.
 Owen, R. 1845 B, p. 141. ("Salmonoids.")
 1866 A.
 Parker, W. K. 1868 A, p. 55.
 1874 A.
 Quenstedt, F. A. 1885 A, p. 365. (Salmonei.)
 Reis, O. M. 1895 C, p. 170.
 Stannius, H. 1854 A. (Salmones.)
 Stephan, P. 1900 A. (Salmones.)
 Ussow, S. 1900 A. ("Salmoniden.")
 Vaillant, L. 1883 A.
 Vrolik, A. J. 1873 A, p. 248.
 Zittel, K. A. 1890 A, p. 279.

RHABDOFARIO Cope. Type *R. lacustris* Cope.

- Cope, E. D. 1870 M, p. 545.
 Zittel, K. A. 1890 A, p. 280.

Rhabdofario lacustris Cope.

- Cope, E. D. 1870 M, p. 546.
 Pleistocene; Idaho.

LEPTICHTHYS Stewart. Type *L. agilis* Stewart.

- Stewart, A. 1899 E, p. 78.
 1900 A, p. 372.

Leptichthys agilis Stewart.

- Stewart, A. 1899 E, p. 78.
 1900 A, p. 372, pl. lxxii, fig. 1.
 Cretaceous; Kansas.

MALLOTUS Cuvier. Type *M. villosus* (Müller).

- Cuvier, G., 1829, Règne Anim., ed. ii, vol. ii, p. 305.
 Agassiz, L. 1843 B (1844), v., p. 98.
 Günther, A. 1866 A, p. 170.
 1880 A, p. 647.
 Jordan and Evermann 1896 A, p. 520.
 Zittel, K. A. 1890 A, p. 280.
Mallotus villosus (Müller).
 Müller, 1877, Prod. Zool. Dan., p. 245. (Clupea.)
 Agassiz, L. 1843 B (1844), v., p. 98, pl. lx.

- Dawson, J. W. 1877 B, p. 341.
 1890 A, p. 86.
 Günther, A. 1866 A, p. 170.
 Jordan and Evermann 1896 A, p. 521.
 Logan, W. E. 1863 A, p. 916, fig. 494.
 Quenstedt, F. A. 1885 A, p. 366.
 Woodward, A. S. 1889 E, p. 230.
 Zittel, K. A. 1890 A, p. 280, fig. 290.
 Living in northern seas: Pleistocene; Canada.

GONORHYNCHIDÆ.

- Cope, E. D. 1872 C, p. 333.
 Gill, T. 1872 C, p. 16.
 Günther, A. 1868 A, p. 373.
 1880 A, p. 652.

- Günther, A. 1881 B, p. 693.
 Nicholson and Lydekker 1889 A, p. 999.
 Woodward, A. S. 1896 B.
 Zittel, K. A. 1890 A, p. 285. (Gonorhynchidæ.)

NOTOGONEUS Cope. Type *N. osculus* Cope.

- Cope, E. D. 1885 Y, p. 1091.
 1886 T, p. 163.
 Nicholson and Lydekker 1889 A, p. 999.
 Woodward, A. S. 1896 B, p. 500.
 Zittel, K. A. 1890 A, p. 285.

Notogoneus osculus Cope.

- Cope, E. D. 1885 Y, p. 1091.
 1886 T, p. 163, pl. i, figs. 4, 5.
 Whitfield, R. P. 1890 A, p. 117.
 Woodward, A. S. 1896 B, p. 500, pl. xviii, figs. 1, 2.
 Eocene (Green River); Montana.

OSTEOGLOSSIDÆ.

- Bridge, T. W. 1895 A, p. 302. (Osteoglossum.)
 Cope, E. D. 1872 C, p. 333.
 1884 O, pp. 67, 68.
 Gegenbaur, C. 1898, p. 356. (Osteoglossum.)
 Günther, A. 1868 A, vii, p. 377.
 Hyrtl, J. 1854 A, p. 73.
 Loomis, F. B. 1900 A, p. 229. (Plethodidae, part.)
 Müller, J. 1843 A, p. 217. (Osteoglossum.)

- Müller, J. 1846 A. (Osteoglossum.)
 1846 C. (Osteoglossum.)
 Nicholson and Lydekker 1889 A, p. 999.
 Owen, R. 1845 B, p. 137, pl. xlviii. (Osteoglossum.)
 Reis, O. M. 1895 C, p. 169.
 Zittel, K. A. 1890 A, p. 281.

PHAREODUS Leidy. Type *P. acutus* Leidy.

- Leidy, J. 1873 D, p. 99.
 Cope, E. D. 1871 E, p. 430. (Osteoglossum.)
 1873 E, p. 637. (Phareodon, in part.)
 1877 I, p. 807. (Dapedoglossus, type *D. testis*.)
 1878 Z, p. 570. (Dapedoglossus.)
 1884 O, p. 68. (Dapedoglossus.)
 Leidy, J. 1873 B, p. 193.
 Nicholson and Lydekker 1889 A, p. 999. (Dapedoglossus.)
 Zittel, K. A. 1890 A, p. 281. (Dapedoglossus.)

Phareodus acutus Leidy.

- Leidy, J. 1873 D, p. 99.
 Cope, E. D. 1873 E, p. 637 (Phareodon acutus);
 p. 638 (*P. sericeus*).
 1884 O, pp. 69, 72, pl. v, figs. 18-20. (Dapedoglossus.)
 King, C. 1878 A, p. 405.
 Leidy, J. 1873 B, pp. 193, 349, pl. xxxii, figs. 47-51.
 Eocene (Bridger); Wyoming.

Phareodus æquipinnis (Cope).

- Cope, E. D. 1878 F, p. 77. (Dapedoglossus.)
 1884 O, p. 73, pl. vii, fig. 2. (Dapedoglossus.)
 Eocene (Green River); Wyoming.

Phareodus encaustus (Cope).

- Cope, E. D. 1871 E, p. 430. (Osteoglossum.)
 1877 I, p. 808. (Dapedoglossus.)
 1877 AA (Dapedoglossus.)
 1878 Z, p. 570. (Dapedoglossus.)
 1884 O, p. 70, pl. vi, fig. 1. (Dapedoglossus.)
 Leidy, J. 1872 B, p. 372. (Osteoglossum.)
 Eocene (Green River); Wyoming.

Phareodus testis Cope.

- Cope, E. D. 1877 I, p. 807.
 1877 AA. (Dapedoglossus.)
 1878 Z, p. 570.
 1884 O, p. 71, pl. vii, fig. 1; pl. viii, figs. 1, 2.
 Eocene (Green River); Wyoming.

ANOGMIUS Cope. Type *A. contractus* Cope.

- Cope, E. D. 1871 J, p. 170.
 1872 I, p. 354.
 1875 E, pp. 220 A, 240.
 1877 D, p. 178.
 Loomis, F. B. 1900 A, p. 229 (Thryptodus, type *T. zitteli*); p. 235 (Pseudothryptodus, type *P. intermedius*); p. 254 ("Anogmius," a syn. of *Osmeroides*).
 Sauvage, H. E. 1879 A, p. 52. (Syn. ? of *Ischyrrhiza*.)
 Stewart, A. 1900 A, p. 340.
 Zittel, K. A. 1890 A, p. 268. (Syn. of *Pachyrhizodus*.)
 Without doubt, close comparison will much reduce the number of species of this genus.

Anogmius aratus Cope.

- Cope, E. D. 1877 G, p. 585.
 Stewart, A. 1900 A, p. 340.
 Cretaceous (Niobrara); Kansas.

Anogmius contractus Cope.

- Cope, E. D. 1871 J, p. 170.
 1872 I, p. 354.
 1875 E, p. 240 (Anogmius); 220 A (Pachyrhizodus).
 Cretaceous (Niobrara); Kansas.

Anogmius evolutus Cope.

- Cope, E. D. 1877 D, p. 179.
 Loomis, F. B. 1900 A, p. 257, pl. xxvi, figs. 5, 6. (Osmeroides.)

- Stewart, A. 1898 D, p. 196. (Beryx multidentatus.)
 1900 A, p. 347, pl. lxxv, figs. 8, 9, 10; pl. lxxvii.
 Cretaceous (Niobrara); Kansas.

Anogmius favirostris Cope.

- Cope, E. D. 1877 D, p. 178.
 Loomis, F. B. 1900 A, p. 256. (Osmeroides.)
 Cretaceous (Niobrara); Kansas.

Anogmius intermedius (Loomis).

- Loomis, F. B. 1900 A, p. 236, pl. xxii, figs. 3-8. (Pseudothryptodus.)
 Cretaceous (Niobrara); Kansas.

Anogmius polymicrodus Stewart.

- Stewart, A. 1898 D, p. 195. (Beryx ?)
 Loomis, F. B. 1900 A, p. 256, pl. xxvi, figs. 1-4. (Osmeroides.)
 Stewart, A. 1899 A, p. 20.
 1899 D, p. 117, pl. xxxi.
 1900 A, p. 342, pl. lxxiv; pl. lxxv, figs. 1-7; pl. lxxvi; pl. lxxvii, fig. "phar."
 Cretaceous (Niobrara); Kansas.

Anogmius rotundus (Loomis).

- Loomis, F. B. 1900 A, p. 235, pl. xxii, figs. 1, 2. (Thryptodus.)
 Cretaceous (Niobrara); Kansas.

Anogmius zitteli (Loomis).

- Loomis, F. B. 1900 A, p. 234, pl. xxi, figs. 1-10. (Thryptodus.)
 Cretaceous (Niobrara); Kansas.

Cope 921871 2. 10584

INCERTÆ SEDIS.

PROBALLOSTOMUS Cope Type *P. longulus* Cope.

Cope, E. D. 1891 H, p. 655.

Cope, E. D. 1892 B, p. 285.
Oligocene?; S. Dakota.**Proballostomus longulus** Cope.

Cope, E. D. 1891 H, p. 655.

Order PLECTOSPONDYLI.

Cope, E. D. 1872 C, p. 332.

1878 A, p. 295.

Gill, T. 1893 A, p. 131.

Jordan and Evermann 1896 A, p. 160.

Woodward, A. S. 1898 B, p. 119.

CYPRINIDÆ.

Bloch, L. 1900 A. ("Cobitiden," "Cypriniden.")

Bridge, T. W. 1896 A, p. 547.

Brühl, B. C. 1847 A. ("Cyprinen.")

Cope, E. D. 1871 H. (>Cobitidæ.)

1871 I, p. 99. (>Cobitidæ.)

1872 C, p. 332. (Catostomidæ, Cyprinidæ,
Cobitidæ.)

1883 L, p. 161. (>Cobitidæ.)

Dareste, C. 1872 A, p. 934. ("Cyprinoïdes.")

Gill, T. 1872 C, pp. 17, 18. (Catostomidæ, Cy-
prinidæ, Cobitidæ.)1893 A, pp. 131, 132. (Catostomidæ, Cyprin-
idæ, Cobitidæ.)

Grassi, B. 1883 A.

Günther, A. 1868 A, p. 3.

1880 A, p. 587.

1881 A, p. 692.

Ihering, H. 1891 B.

Jordan, D. S. 1891 A.

Jordan and Evermann 1896 A, p. 161 (Catosto-
midæ); p. 199 (Cyprinidæ).

Klein, E. F. 1879 A, p. 110.

Kölliker, A. 1859 A. (Cyprinoidei.)

Koken, E. 1891 B, p. 26.

Leidy, J. 1871 C, p. 369.

Müller, A. 1853 A.

Müller, J. 1846 C, p. 183. (Cyprinoidei.)

Owen, R. 1845 B, p. 144. ("Cyprinoids.")
1866 A.

Parker, W. K. 1868 A.

Pictet, F. J. 1854 A, p. 102. (Cyprinoides.)

Quenstedt, F. A. 1885 A, p. 361.

Sagemehl, M. 1884 A, p. 1.

1891 A. (Cyprinidæ, Cobitidæ.)

Segond, L. A. 1873 B, p. 529. ("Cyprinoïdes.")

Stannius, H. 1854 A. (Cyprinoidei.)

Stephan, P. 1900 A.

Vaillant, L. 1883 A.

Vrolik, A. J. 1873 A, p. 265.

Zittel, K. A. 1890 A, p. 282. (Cyprinoidæ.)

CATOSTOMINÆ.

Cope, E. D. 1872 C, p. 332. (Catostomidæ.)

Gill, T. 1872 C, p. 17. (Catostomidæ.)

1893 A, p. 131. (Catostomidæ.)

Günther, A. 1868 A, p. 12.

Günther, A. 1880 A, p. 588. (Catostomina.)

Jordan and Evermann 1896 A, p. 161. (Cato-
stomidæ.)

Sagemehl, M. 1891 A.

PROTOCATOSTOMUS Whitfield. Type *P. constablei* Whitfield.

Whitfield, R. P. 1890 A, p. 120.

Protocatostomus constablei Whitfield.

Whitfield, R. P. 1890 A, p. 120, pl. iv.

Eocene; Wyoming.

See *Notogoneus osculus*, p. 392.CATOSTOMUS Le Sueur. Type *C. catostomus* Le Sueur.

Le Sueur, 1817, Jour. Acad. Nat. Sci. Phila., i, p. 89.

Jordan and Evermann 1896 A, p. 173.

Sagemehl, M. 1891 A.

Catostomus batrachops Cope.

Cope, E. D. 1883 L, p. 151.

1889 F.

1889 S, p. 980.

Pleistocene (Equus beds); Oregon.

Catostomus cristatus Cope.

Cope, E. D. 1883 L, p. 160.

Pleistocene (Equus beds); Idaho.

Catostomus labiatus Ayres.

Ayres, W. O. 1855, Proc. Califor. Acad. Sci., i, p. 32.

Cope, E. D. 1883 L, p. 150.

1889 F.

1889 S.

Jordan and Evermann 1896 A, p. 177.

Recent and Pleistocene; Klamath Lake, Ore-
gon.**Catostomus shoshonensis** Cope.

Cope, E. D. 1883 L, p. 159.

Pleistocene (Equus beds); Idaho.

AMYZON Cope. Type *A. mentale* Cope.

Cope, E. D. 1872 P, p. 480.

1873 E, p. 642.

1884 O, pp. 742, 748.

Osborn, Scott, and Speir 1878 A, p. 99.

Zittel, K. A. 1890 A, p. 284.

Amyzon brevipinne Cope.

Cope, E. D. 1893 D.

Tertiary (Amyzon shales); British Columbia.

Amyzon commune Cope.

Cope, E. D. 1874 D, p. 50.

1874 B, p. 460.

1875 G, p. 3.

1884 O, p. 749, pl. v, fig. 21.

Osborn, Scott, and Speir 1878 A, p. 99.

Tertiary (Amyzon shales); Colorado.

Amyzon fusiforme Cope.

Cope, E. D. 1875 G, p. 5.

1884 O, p. 751.

Tertiary (Amyzon shales); Colorado.

Amyzon mentale Cope.

Cope, E. D. 1872 P, p. 481.

1872 MM, p. 775.

1873 E, p. 643.

1884 O, p. 749, pl. lix, fig. 2; lx, fig. 2.

Tertiary (Amyzon shales); Colorado.

Amyzon pandatum Cope.

Cope, E. D. 1875 G, p. 4.

1884 O, p. 750.

Tertiary (Amyzon shales); Colorado.

CYPRININÆ.

This subfamily is equivalent to the *Cyprinidæ* as recognized by many of the authors referred to under that family.

Brühl, B. C. 1847 A. ("Cyprinen.")

Günther, A. 1880 A, p. 589. (Cyprininae.)

DIASTICHUS Cope. Type *D. macrodon* Cope.

Cope, E. D. 1870 M, p. 539.

1871 H, p. 55.

1883 L, pp. 154, 158.

Zittel, K. A. 1890 A, p. 284.

Diastichus macrodon Cope.

Cope, E. D. 1870 M, p. 539.

1883 L, p. 158.

Late Tertiary; Idaho.

Diastichus parvidens Cope.

Cope, E. D. 1870 M, p. 540.

1883 L, p. 158.

Late Tertiary; Idaho.

Diastichus strangulatus Cope.

Cope, E. D. 1883 L, p. 158.

Late Tertiary; Idaho.

APHELICHTHYS Cope. Type *A. lindahlII* Cope.

Cope, E. D. 1893 B, p. 19.

Aphelichthys lindahlII Cope.

Cope, E. D. 1893 B, p. 19.

Pliocene or Pleistocene; S. Illinois.

RUTILUS Raf. Type *Cyprinus rutilus* Raf.

Rafinesque, C. S., 1820, Ichthyol. Ohioensis, pp. 48, 50.

Cope, E. D. 1870 M, p. 543. (Anchybopsis, type *A. latus*.)

1878 C, p. 229. (Anchybopsis.)

1883 L, p. 142. (Mylolencus.)

Günther, A. 1868 A, p. 267. (Leuciscus, in part.)

Jordan and Evermann 1896 A, p. 243.

Zittel, K. A. 1890 A, p. 284. (Anchybopsis.)

Rutilus altarcus (Cope).

Cope, E. D. 1878 C, p. 229. (Anchybopsis.)

1883 L, p. 146. (Leucus.)

1889 F, (Leucus.)

1889 S, p. 980. (Leucus.)

Pleistocene (Equus); Oregon.

Rutilus condonianus (Cope).

Cope, E. D. 1883 L, p. 156. (Leucus.)

Pleistocene (Equus); Oregon.

Rutilus gibbarcus (Cope).

Cope, E. D. 1878 C, p. 230. (Alburnops.)

1878 C, p. 229. (Alburnops brevianus.)

1883 L, p. 143. (Mylolencus.)

1889 F, p. 161. (Mylolencus.)

1889 S, p. 980. (Mylolencus.)

Pleistocene (Equus); Oregon.

Rutilus latus (Cope).

Cope, E. D. 1870 M, p. 543. (Anchybopsis.)

1883 L, pp. 144, 146, 156. (Leucus.)

Pleistocene (Equus); Idaho.

NOTROPIS Raf. Type *N. atherinoides* Raf.

Rafinesque, C. S., 1818, Amer. Month. Mag., ii, p. 204.
Jordan and Evermann 1896 A, p. 254.

Notropis angustarcus (Cope).

Cope, E. D. 1878 C, p. 230. (Alburnops.)

Cope, E. D. 1883 L, p. 142. (Cliola.)
 1889 F. (Cliola.)
 1889 S, p. 980. (Cliola.)
 Pleistocene (Equus); Oregon.

LEUCISCUS Cuvier. Type, none designated.

Cuvier, G., 1817, Règne Anim., ed. i, p. 194.

Cope, E. D. 1870 M, p. 540 (Oligobelus, type *O. arciferus*); p. 541 (Semotilus).

1883 L, p. 156. (Squalius.)

Günther, A. 1868 A, p. 207.

1880 A, p. 598.

Jordan and Evermann 1896 A, p. 228.

Zittel, K. A. 1890 A, p. 282 (Leuciscus); p. 284 (Oligobelus).

Leuciscus arciferus (Cope).

Cope, E. D. 1870 M, p. 541. (Oligobelus.)

1883 L, p. 158. (Squalius.)

Pleistocene; Idaho.

Leuciscus bairdii (Cope).

Cope, E. D. 1870 M, p. 542. (Semotilus.)

1883 L, p. 158. (Squalius.)

Pleistocene; Idaho.

Leuciscus laminatus (Cope).

Cope, E. D. 1870 M, p. 541. (Oligobelus.)

1883 L, p. 157. (Squalius.)

Pleistocene; Idaho.

Leuciscus posticus (Cope).

Cope, E. D. 1870 M, p. 541. (Semotilus.)

1883 L, p. 157. (Squalius.)

Pleistocene; Idaho.

Leuciscus reddingi (Cope).

Cope, E. D. 1883 L, p. 157. (Squalius.)

Pleistocene; Idaho.

Leuciscus turneri Lucas.

Lucas, F. A. 1900 F, p. 333, pl. viii.

Miocene; Nevada.

MYLOCYPRINUS Leidy. Type *M. robustus* Leidy.

Leidy, J. 1870 K, p. 70.

Cope, E. D. 1870 M, pp. 539, 543.

1883 L, p. 154.

Leidy, J. 1871 C, p. 369.

Peters, 1880, Monatsber. Akad. Wissensch. Berlin, p. 925, figure. (Mylopharyngodon, type *Leuciscus aethiops*.)

Zittel, K. A. 1890 A, p. 284.

Mylocyprinus inflexus Cope.

Cope, E. D. 1883 L, p. 154.

Pleistocene; Idaho.

Mylocyprinus robustus Leidy.

Leidy, J. 1870 K, p. 70.

Cope, E. D. 1870 M, p. 544 (M. kingii, M. robustus); p. 545 (M. longidens).

1883 L, p. 155. (M. robustus, with M. kingii and longidens as subspecies.)

Leidy, J. 1871 C, p. 369.

1873 B, pp. 262, 348, pl. xvii, figs. 11-17.

Pleistocene; Idaho.

Order PHTHINOBRANCHII nom nov.

Interclavicles developed. Elements of the branchial arches more or less reduced. Post-temporal simple. Basis cranii simple. Head more or less produced. Ventral fins abdominal, subabdominal, or wanting. Most families

with more or less well-developed dermal armature.

In this order it is intended to unite the *Hemibranchii* and the *Lophobranchii*.

Suborder HEMIBRANCHII Cope.

Cope, E. D., 1871, Trans. Amer. Philos. Soc., xiv, p. 456.

1872 C, p. 338.

Gill, T. 1872 C, p. 13.

Gill, T. 1893 A, p. 137.

Jordan and Evermann 1896 A, p. 741.

Ussow, S. 1900 A, p. 227. (Gasterosteiformes.)

DERCETIDÆ.

Cope, E. D. 1878 F, p. 67.

Agassiz, L. 1843 B, ii, pt. ii, p. 258. (Genus *Dercetis*.)

Günther, A. 1880 A, p. 666. (Hoplopleuridæ.)

Lütken, C. 1873 A, p. 17. (Dercetiformes.)

Marck, W. 1863 A, p. 58. (Dercetiformes.)

Nicholson and Lydekker 1889 A, p. 997.
 Pictet, F. J. 1854 A, p. 213 (Hoplopleurides); p. 216,
 pl. xxxii, figs. 13-16 (Dercetes).
 Pictet and Humbert 1866 A, p. 90. (Hoplopleu-
 rides.)

Reis, O. M. 1895 C, pp. 169, 180, 182. (Hoplopleu-
 ridæ.)
 Williston, S. W. 1899 B, p. 115.
 1900, in Stewart A. 1900 A, p. 380.
 Zittel, K. A. 1890 A, p. 264. (Hoplopleuridæ.)

ICHTHYOTRINGA Cope. Type *I. tenuirostris* Cope.

Cope, E. D. 1878 F, p. 69.
 1878 HH, p. 57.
 Williston, S. W. 1899 B, p. 115.
 1900, in Stewart A. 1900 A, p. 382.

Ichthyotringa tenuirostris Cope.
 Cope, E. D. 1878 F, p. 69.
 Cretaceous (Niobrara); South Dakota.

LEPTECODON Williston. Type *L. rectus* Willist.

Williston, S. W. 1899 B, p. 113.
Leptecodon rectus Willist.
 Williston, S. W. 1899 B, p. 113, pl. xxvi.

Williston, S. W. 1900, in Stewart, A. 1900 A, p. 380,
 pl. lxxiii.
 Cretaceous (Niobrara); Kansas.

TRIENASPIS Cope. Type *T. virgulatus* Cope.

Cope, E. D. 1878 F, p. 67.
 1878 HH, p. 57.
 Williston, S. W. 1899 B, p. 115.
 1900, in Stewart, A. 1900 A, p. 382.

Trienaspis virgulatus Cope.
 Cope, E. D. 1878 F, p. 67.
 Cretaceous (Niobrara); S. Dakota.

LEPTOTRACHELUS Marck. Type *L. armatus* Marck.

Marck, W. 1863 A, p. 59.
 Cope, E. D. 1878 F, p. 68.
 1878 HH, p. 57.
 Davis, J. W. 1887 C, p. 619.
 Nicholson and Lydekker 1889 A, p. 997. (Syn. of
 Dercetes.)
 Pictet and Humbert 1866 A, p. 93.

Reis, O. M. 1895 C, p. 169.
 Zittel K. A. 1890 A, p. 268.
Leptotrachelus longipinnis Cope.
 Cope, E. D. 1878 F, p. 68.
 Williston, S. W. 1899 B, p. 115.
 1900, in Stewart, A. 1900 A, p. 382.
 Cretaceous (Niobrara); S. Dakota.

GASTEROSTEIDÆ.

Cope, E. D. 1872 C, p. 338.
 Gill, T. 1893 A, p. 137.
 Günther, A. 1859 L, p. 1.
 1880 A, p. 504.

Jordan and Evermann 1896 A, p. 742.
 Parker, W. K. 1868 A, p. 39.
 Sauvage, H. E. 1874 A. ("Épinoches.")

GASTEROSTEUS Linn. Type *G. aculeatus* Linn.

Linnaeus, C., 1758, Syst. Nat., ed. x, p. 489.
 Günther, A. 1859 A, p. 2.
 1880 A, p. 505.
 Huxley, T. H. 1858 C, p. 39.
 Jordan and Evermann 1896 A, p. 746.
 Owen, R. 1845 B, p. 91.
 Parker, W. K. 1868 A, p. 39.
 Sauvage, H. E. 1874 A, p. 5.

Dawson, J. W. 1877 B, p. 341. (*G. aculeatus*?)
 1890 A, p. 86. (*G. aculeatus*?)
 Jordan and Evermann 1896 A, p. 748.
 Living; Labrador to New Jersey: Pleisto-
 cene; Canada.
 It seems most probable that the stickleback
 found fossil in Canada by Dr. Dawson is the *G.*
bispinosus, common on our Eastern coast.

Gasterosteus bispinosus Walbaum.

Walbaum, 1792, Artedi Pisc., p. 450.

Order MESICHTHYES nom. nov.

Actinopteri with anterior vertebræ unmodi-
 fied and not connected with auditory appara-
 tus. Branchial arches well developed. Pre-
 coracoid arch and interclavicles absent. Ven-
 tral fins abdominal.

This order is intended to include the *Haplomi*,
 the *Synentognathi*, and the *Percesoces*.

Suborder HAPLOMI Cope.

Cope, E. D. 1872 C, pp. 328, 333.

Gill, T. 1872 C, p. 14.

Gill, T. 1893 A, p. 133.

Jordan and Evermann 1896 A, p. 622.

LUCIIDÆ.

Unless otherwise indicated, the family name
Esocidæ is used by the following writers.

Bridge, T. W. 1896 A, p. 545.

Brühl B. C. 1847 A. (Esoc.)

Cope, E. D. 1872 C, p. 333.

1875 E, p. 280. (Ischyrrhizidæ.)

Dareste, C. 1872 A, p. 1086.

Gill, T. 1872 C, p. 15.

Grassi, B. 1883 H.

Günther, A. 1866 A, p. 226.

1880 A, p. 623.

1881 A, p. 693.

Jordan and Evermann 1896 A, p. 624. (Luciidæ.)

Klein, E. F. 1879, p. 108. (Esoc.)

Kölliker, A. 1859 A. (Esoces.)

Müller, A. 1853 A.

Müller, J. 1843 A, p. 215. (Esoces.)

1846 C, p. 188. (Esoces.)

Nicholson and Lydekker 1889 A, p. 1000.

Owen, R. 1845 B, p. 131. ("Lucioids.")

1866 A, p. 10 *et seq.*

Parker, W. K. 1868 A, p. 54.

Pictet, F. J. 1854 A, p. 108.

Quenstedt, F. A. 1885 A, p. 365. (Esocini.)

Reis, O. M. 1895 C, p. 170.

Röse, C. 1897 A, with figures.

Stannius, H. 1854 A. (Esoces.)

Stephan, P. 1900 A. (Esoc.)

Vaillant, L. 1883 A.

Vrolik, A. J. 1873 A, pp. 235, 261.

Woodward, A. S. 1898 B, p. 120.

Zittel, K. A. 1890 A, p. 270.

ISCHYRHIZA Leidy. Type *I. mira* Leidy.

Leidy, J. 1856 K, p. 221.

Cope, E. D. 1872 I, p. 355.

1875 E, p. 280.

Leidy, J. 1857 A, p. 272.

Zittel, K. A. 1890 A, p. 270.

This genus is assigned only provisionally to
the *Luciidæ*.

Ischyrrhiza antiqua Leidy.

Leidy, J. 1856 L, p. 256.

Cope, E. D. 1875 E, p. 280.

1875 V, p. 32.

1887 G, p. 566.

Emmons, E. 1858 B, p. 225, figs. 47, 48.

Leidy, J. 1857 A, p. 272.

Leidy, J. 1860 B, p. 120. (Syn. of *I. mira*.)

Cretaceous: North Carolina: (Fox Hills);

New Mexico.

Ischyrrhiza mira Leidy.

Leidy, J. 1856 K, p. 221.

Cope, E. D. 1872 I, p. 355.

1875 E, p. 280.

Leidy, J. 1860 B, p. 120, pl. xxv, figs. 3-9. (*I. antiqua* a synonym.)

Cretaceous; New Jersey: Miocene?; South
Carolina.

Ischyrrhiza ? radiata Clark.

Clark, W. B. 1895 A, p. 4.

1897 A, p. 60, pl. vii, figs.

Eocene; Virginia.

PŒCILIIDÆ.

Cope, E. D. 1872 C, p. 338. (Cyprinodontidæ.)

Gill, T. 1894 B, p. 115. (Pœciliidæ.)

1896 B, p. 221. (Pœciliidæ.)

Günther, A. 1866 A, p. 299. (Cyprinodontidæ.)

1880 A, p. 613. (Cyprinodontidæ.)

1881 A, p. 693. (Cyprinodontidæ.)

Ihering, H. 1891 B, p. 477. (Cyprinodontidæ.)

Jordan and Evermann 1896 A, p. 630.

Kölliker, A. 1859 A. (Cyprinodontes.)

Müller, J. 1846 C, pp. 183, 202. (Cyprinodontes.)

Nicholson and Lydekker 1889 A, p. 1000. (Cypri-
nodontidæ.)

Reis, O. M. 1895 C, p. 170. ("Cyprinodonten.")

Stannius H. 1854 A. (Cyprinodontes.)

Zittel, K. A. 1890 A, p. 281. (Cyprinodontidæ.)

GEPHYURA Cope. Type *G. concentrica* Cope.

Cope, E. D. 1891 H, p. 654.

The position of the genus is in doubt.

Gephyura concentrica Cope.

Cope, E. D. 1891 H, p. 654.

1892 B, p. 285.

Oligocene?; South Dakota.

Suborder PERCESOCES Cope.

Cope, E. D., 1871, Trans. Amer. Phil. Soc., xiv, p.
456.

1872 C, pp. 335, 337.

Gill, T. 1872 C, p. 13.

Gill, T. 1893 A, p. 133.

Jordan and Evermann 1896 A, p. 787.

Starks, E. C. 1899 A, p. 1.

MUGILIDÆ.

- Agassiz, L. 1843 B (1844), v, p. 119. ("Mugiloides.")
 Cope, E. D. 1872 C, p. 338.
 Daresse, C. 1872 A, p. 1175. ("Mugiloides.")
 Gill, T. 1872 C, p. 13.
 Günther, A. 1861 A, p. 409.
 1880 A, p. 501.
 Jordan and Evermann 1898 A, p. 808.
 Kolliker, A. 1859 A. (Mugiloides.)

- Nicholson and Lydekker 1889 A, p. 1005.
 Owen, R. 1845 B, p. 120. ("Mugiloids.")
 1866 A, p. 11 *et seq.*
 Parker, W. K. 1868 A, p. 50.
 Stannius, H. 1854 A. (Mugiloides.)
 Starks, E. C. 1899 A, p. 1.
 Zittel, K. A. 1890 A, p. 312.

It is not certain that any of the genera here assigned to this family really belong to it.

CLADOCYCLUS Agassiz. Type *C. lewesiensis* Agassiz.

- Agassiz, L. 1843 B (1844), v, p. 103.
 Geinitz, H. B. 1868 A, p. 42.
 1875 A, p. 224.
 Leidy, J. 1873 B, p. 288.
 Loomis, F. B. 1900 A, p. 237. (Syn. of Ichthyodectes.)
 Nicholson and Lydekker 1889 A, p. 1006.
 Pictet, F. J. 1854 A, p. 94.
 Woodward and Sherborn 1890 A, p. 34.

Cladocyclus occidentalis Leidy.

- Leidy, J. 1856 M, p. 256.
 1857 C, p. 90.
 1873 B, pp. 288, 347, pl. xvii, figs. 21, 22; pl. xxx, fig. 5.
 Loomis, F. B. 1900 A, pp. 237, 242. (Syn. of Ichthyodectes arcuatus.)
 Whiteaves, J. F. 1889 B, p. 195, pl. xxvi, figs. 8, 9.
 Cretaceous; South Dakota, Manitoba.

PELECORAPIS Cope. Type *P. varius* Cope.

- Cope, E. D. 1874 C, p. 39.
 1875 E, pp. 182, 273.
 1877 G, p. 587.
 Zittel, K. A. 1890 A, p. 312.

Pelecorapis berycinus Cope.

- Cope, E. D. 1877 G, p. 587.
 Cretaceous (Pierre); Montana.

Pelecorapis varius Cope.

- Cope, E. D. 1874 C, p. 39.
 1875 E, pp. 182, 273.
 1877 G, p. 587.
 Cretaceous (Benton); Kansas.

SYLLÆMUS Cope. Type *S. latifrons* Cope.

- Cope, E. D. 1875 E, pp. 180, 273.
 1877 K, p. 26.
 Nicholson and Lydekker 1889 A, p. 1005. (Syn. of Calamopleurus.)
 Stewart, A. 1900 A, p. 383.
 Woodward, A. S. 1888 I, p. 325.
 Zittel, K. A. 1890 A, p. 312. (Syllæmus.)

Syllæmus latifrons Cope.

- Cope, E. D. 1875 E, pp. 181, 273.
 1877 K, p. 26. **PL XXXIII 164**
 Stewart, A. 1900 A, p. 384, pl. lxxii.
 Cretaceous; New Mexico?; Cretaceous (Benton); Kansas.

SPHYRÆNIDÆ.

- Agassiz, L. 1843 B, v, p. 93. ("Sphyrænoides.")
 1845 A, p. 291. (Sphyrænoides.)
 Bridge, T. W. 1896 A, p. 569.
 Cope, E. D. 1870 L, p. 529.
 Gill, T. 1872 C, p. 12.
 Günther, A. 1860 A, p. 334.
 1880 A, p. 499.

- Günther, A. 1881 A, p. 690.
 Jordan and Evermann 1898 A, p. 822.
 Klein, E. F. 1879 A, p. 91.
 Nicholson and Lydekker 1889 A, p. 1006.
 Quenstedt, F. A. 1885 A, p. 375. (Sphyrænoides.)
 Starks, E. C. 1899 A, p. 1.
 Zittel, K. A. 1890 A, p. 312.

DICTYODUS Owen. Without designated type.

- Owen, R. 1839, Rep. Brit. Assoc. Adv. Sci. for 1838, p. 142.
 Agassiz, L. 1843 B (1844), v, pp. 8, 98. (Sphyrænoidus.)
 Giebel, C. G. 1848 A, p. 92. (Sphyrænoidus.)
 Owen, R. 1845 B, pp. 6, 12, pl. liv (Dictyodus).
 p. 128 (Sphyrænoidus).
 Pictet, F. J. 1854 A, p. 93. (Sphyrænoidus.)
 Zittel, K. A. 1890 A, p. 312.

Dictyodus silovianus (Cope).

- Cope, E. D. 1875 H, p. 362. (Sphyrænoidus).
 Miocene; New Jersey.

Dictyodus speciosus (Leidy.)

- Leidy, J. 1856 K, p. 221. (Sphyræna.)
 Cope, E. D. 1867 C, p. 142. (Sphyræna.)
 1875 H, p. 362. (Sphyrænoidus).
 Miocene; New Jersey.

SPHYRÆNA Bloch and Schn. Type *Esox sphyræna* Linn.

Bloch and Schneider, 1801, Syst. Ichth., p. 109.

Agassiz L. 1843 B (1844), v, pp. 8, 93.

1845 A, p. 291.

Günther, A. 1860 A, p. 334.

Jordan and Evermann 1896 A, p. 822.

Owen, R. 1845 B, pp. 4, 6, 126, pl. liii.

Pictet, F. J. 1854 A, p. 92.

Starks, E. C. 1899 A, p. 8.

Zittel, K. A. 1890 A, p. 312.

Sphyræna major Leidy.

Leidy, J. 1855 C, p. 397.

1877 A, p. 254, pl. xxxiv, figs. 37-41.

Sands of Ashley River; South Carolina.

Order PERCOMORPHI.

Cope, E. D. 1872 C, p. 341.

1881 O, p. 79.

Cope, E. D. 1889 R, p. 860.

Suborder SQUAMIPINNES.

Günther, A. 1860 A, p. 1.

Jordan and Evermann 1896 A, p. 781,

1898 A, p. 1665.

Kölliker, A. 1859 A. (Squamipennes.)

Zittel, K. A. 1890 A, p. 299. (Squamipennes.)

CHÆTODONTIDÆ.

Gill, T. 1872 C, p. 8. (Chætodontidæ, Ephippidæ.)

Cope, E. D. 1872 C, p. 342.

Günther, A. 1860 A, p. 1. (Squamipinnes, in part.)
1880 A, p. 397. (Squamipinnes, in part.)

Jordan and Evermann 1898 A, p. 1666 (Ephippidæ); p. 1669 (Chætodontidæ).

Kölliker, A. 1859 A. (Squamipennes.)

Nicholson and Lydekker 1889 A, p. 1013.

Parker, W. K. 1868 A, p. 50.

Zittel, K. A. 1890 A, p. 299. (Squamipennes.)

CHÆTODIPTERUS Lacépède. Type *C. faber* (Brouss.).

Lacépède, 1802, Hist. Nat. Poiss., iv, p. 503.

Günther, A. 1860 A, p. 60. (Ephippus.)

1880 A, p. 402, fig. 171. (Ephippus.)

Jordan and Evermann 1898 A, p. 1667.

Nicholson and Lydekker 1889 A, p. 1013. (Ephippus.)

Owen, R. 1866 A, pp. 108, 111. (Ephippus.)

Zittel, K. A. 1890 A, p. 299. (Ephippus.)

Chætodipterus faber (Brouss.).

Broussonet, 1782, Ichth. Decas, 1, v, pl. 4, *fide* Jordan and Evermann. (Chætodon.)

Jordan and Evermann 1898 A, p. 1668.

Leidy, J. 1889 E, p. 81. (Ephippus gigas.)

Recent; Cape Cod to Rio Janeiro: Pleistocene; Florida.

Suborder PHARYNGOGNATHI.

Cope, E. D. 1872 C, p. 343.

Gill, T. 1872 C, p. 6.

1893 A, p. 135. (Pomacentroidea, Labroidæ.)

Ihering, H. 1891 B, p. 508.

Jordan and Evermann 1898 A, p. 1571.

Kner, R. 1860 A, p. 41.

Kölliker, A. 1859 A.

Müller, J. 1846 C, pp. 131, 155, 199.

Parker, W. K. 1868 A, p. 49.

Reis, O. M. 1895 C, p. 163.

Stannius, H. 1854 A.

Zittel, K. A. 1890 B, p. 287.

LABRIDÆ.

Agassiz L. 1845 A, p. 291. (Labroidæ.)

Brühl, B. C. 1847 A.

Cocchi, I. 1864 A. (Pharyngodopilidæ.)

Cope, E. D. 1872 C, p. 343.

Darrest, C. 1872 A, p. 1174. ("Labroides.")

Gill, T. 1872 C, p. 7.

1893 A, p. 135.

Günther, A. 1862 A, p. 65.

1880 A, p. 525.

Jordan, D. S. 1891 A.

Jordan and Evermann 1898 A, p. 1571.

Kner, R. 1860 A, p. 41. ("Labroiden.")

Kölliker, A. 1859 A. (Labroidæi.)

Müller, J. 1846 C, p. 168. (Labroidæi.)

Nicholson and Lydekker 1889 A, p. 1004. (Labridæ, Pharyngodopilidæ.)

Owen, R. 1845 B, p. 108. ("Labroids.")

1866 A, p. 11 *et seq.* (Cyclo-labridæ.)

Parker, W. K. 1868 A, p. 50.

Reis, O. M. 1895 C.

Sauvage, H. E. 1875 B, p. 615. (Pharyngodopilidæ, Phyllodidæ.)

Zittel, K. A. 1890 A, p. 288.

In this family are included provisionally the genera *Nummopalatus* and *Phyllodus*.

PROTAUTOGA Leidy. Type *P. conidens* Leidy.

- Leidy, J.* 1873 C, p. 15. (Assubgenus of *Tautoga*.)
1873 B, p. 347.
Nicholson and Lydekker 1889 A, p. 1004.
Zittel, K. A. 1890 A, p. 289.

Protautoga conidens Leidy.

- Leidy, J.* 1873 C, p. 15. [*Tautoga* (*Protautoga*.)]
1873 A, p. 312. [*Tautoga* (*Protautoga*.)]
1873 B, p. 346, pl. xxxii, figs. 56, 57. [*Tautoga* (*Protautoga*.)]
Miocene; Virginia.

NUMMOPALATUS Roualt. Type *N. edwardsius* Roualt.

- Roualt, M.* 1858 A, p. 101.
Cocchi, I. 1864 A, p. 59. (*Pharyngodopilus*.)
Cornuel, J. 1877 A, p. 620.
Günther, A. 1880 A, p. 526.
Leidy, J. 1855 C, p. 396. (*Odax*.)
Reis, O. M. 1895 C, p. 174.
Sauvage, H. E. 1875 B, p. 613.

- Zittel, K. A.* 1890 A, p. 289.

Nummopalatus carolinensis (Leidy.)

- Leidy, J.* 1855 C, p. 396. (*Odax*.)
1877 A, p. 256, pl. xxxiv, figs. 19, 24. (*Pharyngodopilus*.)
Phosphate beds; South Carolina.

PHYLLODUS Agassiz. Type not designated.

- Agassiz, L.* 1843 B, ii, pt. ii, p. 238.
1844 A.
Cocchi, I. 1864 A, p. 59.
Cornuel, J. 1877 A, p. 619.
Giebel, C. G. 1848 A, p. 174.
Günther, A. 1880 A, p. 526.
Nicholson and Lydekker 1889 A, p. 1004, fig. 941.
Owen, R. 1845 B, p. 138, pl. xlv, fig. 2; pl. xlvii, figs. 1, 2.
Pictet, F. J. 1854 A, p. 208.
Quenstedt, F. A. 1885 A, p. 381.
Sauvage, H. E. 1875 B, p. 615.
Wyman, J. 1850 B, p. 234.
1850 C.
Zittel, K. A. 1890 A, p. 289.

Phyllodus curvidens Marsh.

- Marsh, O. C.* 1870 E, p. 229.
Cope, E. D. 1875 H, p. 362.
Miocene; New Jersey.

Phyllodus elegans Marsh.

- Marsh, O. C.* 1870 E, p. 228.
Eocene; New Jersey.

Phyllodus hipparionyx Eastman.

- Eastman, C. R.* 1900, Geol. Surv. Maryland, iv, p. 103.
Wyman, J. 1850 B, p. 234, figs. 9a, 9b. ("Phyllodus.")
Eocene; South Carolina.

POMACENTRIDÆ.

- Gill, T.* 1872 C, p. 7.
Günther, A. 1862 A, p. 1.
1880 A, p. 524.
Jordan and Evermann 1898 A, p. 1543.

- Kner, R.* 1860 A, p. 42. ("Pomacentrinen.")
Nicholson and Lydekker 1889 A, p. 1004.
Owen, R. 1866 A, p. 11. (*Ctenolabridæ*.)
Zittel, K. A. 1890 A, p. 287.

PRISCACARA Cope. Type *P. serrata* Cope.

- Cope, E. D.* 1877 I, p. 816.
1884 O, p. 92.
Nicholson and Lydekker 1888 A, p. 1004.
Zittel, K. A. 1890 A, p. 288.

Priscacara clivosa Cope.

- Cope, E. D.* 1878 F, p. 76.
1877 AA.
1884 O, p. 96, pl. xiii, fig. 3.
Eocene (Green River); Wyoming.

Priscacara cypha Cope.

- Cope, E. D.* 1877 I, p. 817.
1878 Z, p. 570.
1884 O, p. 94, pl. xiii, fig. 2.
Eocene (Green River); Wyoming.

Priscacara hypsacantha Cope.

- Cope, E. D.* 1886 T, p. 164, pl. i, fig. vi.
Eocene (Green River); Wyoming.

Priscacara liops Cope.

- Cope, E. D.* 1877 I, p. 818.
1877 AA.
1878 Z, p. 570.
1884 O, p. 97, pl. xiv, figs. 2, 3.
Eocene (Green River); Wyoming.

Priscacara oxyprion Cope.

- Cope, E. D.* 1878 F, p. 74.
1884 O, p. 94, pl. xiv, fig. 5.
Eocene (Green River); Wyoming.

Priscacara pealei Cope.

- Cope, E. D.* 1878 F, p. 75.
1884 O, p. 96, pl. viii, fig. 4; pl. xiv, fig. 4.
Eocene (Green River); Wyoming.

Priscacara serrata Cope.

- Cope, E. D.* 1877 I, p. 816.

Cope, E. D. 1877 AA.

1878 Z, p. 570.

1884 O, p. 93, pl. xiii, fig. 1.

1886 T, p. 165.

Eocene (Green River); Wyoming.

Priscacara testudinaria Cope.

Cope, E. D. 1884 O, p. 98, pl. i, fig. 7.

1880 T, p. 303. (No description.)

Eocene (Manti); Utah.

Superfamily BERYCOIDEA Gill.

Gill, T. 1872 C, p. 10.

| Gill, T. 1893 A, p. 133.

BERYCIDÆ.

Bridge, T. W. 1896 A, p. 560.

Cope, E. D. 1872 C, p. 342.

Gill, T. 1872 C, p. 10.

Günther, A. 1859 A, pp. 8, 12.

1880 A, p. 420.

Jordan and Evermann 1898 A, p. 837.

Klein, E. F. 1879 A, p. 80.

Nicholson and Lydekker 1889 A, p. 1010.

Reis, O. M. 1895 C, p. 175.

Zittel, K. A. 1890 A, p. 291.

BERYX Cuvier. Type *B. decadactylus* C. and V.

Cuvier, G., 1829, Règne Anim., ed. ii, p. 151.

Agassiz, L. 1844 A.

Bridge, T. W. 1896 A, p. 563.

Dixon, F. 1878 A, p. 398.

Eichwald, E. 1868 A, p. 1196.

Günther, A. 1859 A, p. 12.

1880 A, p. 422.

Huxley, T. H. 1876 B, xiii, p. 388.

Pictet, F. J. 1854 A, p. 49.

Pictet and Humbert 1866 A, pp. 13, 27.

Williamson, W. C. 1849 A, p. 444.

Zittel, K. A. 1896 A, p. 291.

Beryx insculptus Cope.

Cope, E. D. 1869 F, p. 240.

1872 I, p. 357.

1875 E, p. 272, pl. lii, fig. 4.

Cretaceous; New Jersey.

Superfamily SCOMBROIDEA Gill.

Gill, T. 1872 C, p. 8.

1893 A, p. 133.

Kölliker, A. 1859 A. (Scomberoidei.)

Parker, W. K. 1868 A, p. 50. ("Scombroids.")

Stannius, H. 1854 A. (Scomberoidei, as family.)

XIPHIIDÆ.

Agassiz, L. 1845 A, p. 289. (Xiphioidæ.)

Cope, E. D. 1872 C, p. 342. (Xiphiadidæ.)

Gill, T. 1872 C, p. 8.

1883 A, p. 485. (Xiphiidæ, Histiophoridae.)

Günther, A. 1860 A, p. 511.

Günther, A. 1880 A, p. 431.

Jordan and Evermann 1896 A, p. 893.

Nicholson and Lydekker 1889 A, p. 1010.

Reis, O. M. 1895 C.

Zittel, K. A. 1890 A, p. 300.

ISTIOPHORINÆ.

Gill, T. 1883 A, p. 486. (Histiophoridae.)

1893 A, p. 133. (Histiophoridae.)

Goode, G. B. 1882 A, p. 417. (Tetrapturinae.)

Jordan and Evermann 1896 A, p. 890. (Istiophoridae.)

ISTIOPHORUS Lacépède. Type *I. gladiifer* = *I. gladius*.

Lacépède, 1802, Hist. Nat. Poissons, iii, p. 374.

Goode, G. B. 1882 A, p. 423. (Histiophorus.)

Günther, A. 1860 A, p. 512. (Histiophorus.)

1880 A, p. 431. (Histiophorus.)

Jordan and Evermann 1896 A, p. 890.

Nicholson and Lydekker 1889 A, p. 1010. (Histiophorus.)

Owen, R. 1845 B, p. 121. (Histiophorus.)

Quenstedt, F. A. 1885 A, p. 371. (Histiophorus.)

Istiophorus antiquus (Leidy).

Leidy, J. 1855 C, p. 397. (Xiphias.)

Cope, E. D. 1869 L, p. 810. (Histiophorus.)

Eocene; New Jersey.

Istiophorus homalorhamphus Cope.

Cope, E. D. 1869 L, p. 310. (Histiophorus.)

Tertiary greensand; New Jersey.

Istiophorus parvulus Marsh.

Marsh, O. C. 1870 E, p. 227. (Histiophorus.)

Eocene; New Jersey.

Istiophorus robustus (Leidy).

Leidy, J. 1860 B, p. 119, pl. xxvii, figs. 3-5. (Xiphias.)

Cope, E. D. 1869 L, p. 310. (Histiophorus.)

Post-pliocene; South Carolina.

EMBALORHYNCHUS Marsh. Type *E. kinnei* Marsh.

Marsh, O. C. 1870 E, p. 228.

Embalorhynchus kinnei Marsh.

Marsh, O. C. 1870 E, p. 228.

Eocene; New Jersey.

TRICHIURIDÆ.

Cope, E. D. 1872 C, p. 342.

Dames, W. 1887 B, p. 71.

Günther, A. 1860 A, p. 342.

Günther, A. 1880 A, p. 433.

Jordan and Evermann 1896 A, p. 888.

Zittel, K. A. 1890 A., p. 302.

TRICHIURUS Linn. Type *T. lepturus* Linn.

Linnaeus, C., 1758, Syst. Nat., ed. x, p. 246.

Günther, A. 1860 A, p. 346.

Jordan and Evermann 1896 A, p. 888.

Owen, R. 1845 B, pp. 2, 125, pl. i, fig. 8.

Trichiurus lepturus Linn.

Linnaeus C., 1758, Syst. Nat., ed. x, p. 246.

Jordan and Evermann 1896 A, p. 889.

Leidy, J. 1860 B, p. 121, pl. xxv, fig. 2. (*T. lepturus* fossilis.)

Recent; West Indies to Virginia: Post-pliocene; South Carolina.

CARANGIDÆ.

Gill, T. 1872 C, p. 8.

Cope, E. D. 1872 C, p. 342.

Gill, T. 1893 A, p. 133.

Günther, A. 1860 A, p. 417.

1880 A, p. 440.

Jordan and Evermann 1896 A, p. 895.

Nicholson and Lydekker 1889 A, p. 1008.

Pictet and Humbert 1866 A, p. 45. ("Carangides.")

Reis, O. M. 1895 C, p. 177.

Zittel, K. A. 1890 A, p. 304.

PLATAX Cuvier. Type not specified.

Cuvier and Valenciennes, 1831, Hist. Nat. Poiss., vii, p. 213.

Agassiz, L. 1844 A, p. 207.

Davis, J. W. 1887 C, p. 523.

Giebel, C. G. 1848 A, p. 55.

1860 A, p. 489.

Günther, A. 1880 A, p. 448.

Nicholson and Lydekker 1889 A, p. 1009.

Owen, R. 1845 B, p. 2, pl. i, fig. 2.

Pictet, F. J. 1854 A, p. 67.

Pictet and Humbert 1866 A, p. 46.

Quenstedt, F. A. 1885 A, p. 386.

Zittel, K. A. 1890 A, p. 304.

Platax sp. indet.

Gibbes, R. W. 1850 A, p. 77.

1850 G, p. 300, pl. xlii, figs. 11-13.

Pliocene; South Carolina.

Superfamily PERCOIDEA Gill.

Gill, T. 1893 A, p. 134.

APHREDODERIDÆ.

Cope, E. D. 1870 H, p. 380. (Asineopidæ.)

1877 AA. (Asineopidæ.)

1884 O, p. 79 (Aphrododeridæ); p. 85 (Asineopidæ).

Günther, A. 1859 A, p. 271.

Günther, A. 1880 A, p. 396.

Jordan and Evermann 1896 A, p. 785.

Nicholson and Lydekker 1889 A, p. 1014. (Aphrododeridæ, Asineopidæ.)

Zittel, K. A. 1890 A, p. 296. (Percidæ, in part.)

AMPHIPLAGA Cope. Type *A. brachyptera* Cope.

Cope, E. D. 1877 I, p. 812.

1884 O, p. 83.

Amphiplaga brachyptera Cope.

Cope, E. D. 1877 I, p. 812.

Cope, E. D. 1877 Z, p. 570.

1877 AA.

1884 O, p. 84.

Eocene (Green River); Wyoming.

ASINEOPS Cope. Type *A. squamifrons* Cope.*Cope, E. D.* 1870 H, p. 380.

1871 E, p. 425.

1884 O, p. 84.

Leidy, J. 1871 C, p. 369.

Nicholson and Lydekker 1889 A, p. 1014.

Zittel, K. A. 1890 A, p. 299.

Asineops pauciradiatus Cope.*Cope, E. D.* 1877 I, p. 813.

1877 A A.

1878 Z, p. 570.

Cope, E. D. 1884 O, p. 87, pl. xiv, fig. 1.

Eocene (Green River); Wyoming.

Asineops squamifrons Cope.*Cope, E. D.* 1870 H, p. 381.1871 E, p. 426. (*A. squamifrons*, *A. viridensis*.)

1884 O, p. 85, pl. ix, fig. 5; pl. xi.

King, C. 1878 A, p. 394. (*A. squamifrons*, *A. viridensis*.)

Leidy, J. 1871 C, p. 369.

Eocene (Green River); Wyoming.

TRICHOPHANES Cope. Type *T. hians* Cope.*Cope, E. D.* 1872 P, p. 479.

1873 E, p. 641.

1879 N.

1884 O, pp. 79, 742, 752.

Osborn, Scott, and Speir 1878 A, p. 97.

Trichophanes copei Osb., Sc. and Sp.*Osborn, Scott, and Speir*, 1878 A, p. 98.*Cope, E. D.* 1884 O, p. 752.

Oligocene; Colorado.

Trichophanes foliarum Cope.*Cope, E. D.* 1878 F, p. 73.

1884 O, p. 753, pl. lix, fig. 4.

Oligocene; Colorado.

Trichophanes hians Cope.*Cope, E. D.* 1872 P, p. 481.

1872 MM, p. 775.

1873 E, p. 642.

1884 O, p. 753, pl. lix, fig. 3.

Oligocene; Nevada.

ERISMATOPTERUS Cope. Type *E. rickseckeri* Cope.*Cope, E. D.* 1871 E, p. 427.

1884 O, p. 80.

Zittel, K. A. 1890 A, p. 296.

Erismatopterus endlichii Cope.*Cope, E. D.* 1877 I, p. 811.

1877 Z, p. 570.

1877 A A.

1884 O, p. 82, pl. xii, fig. 5.

Eocene (Green River); Wyoming.

Erismatopterus levatus Cope.*Cope, E. D.* 1870 H, p. 382. (Cyprinodon.)

1871 E, p. 428.

1884 O, p. 80, pl. ix, figs. 6, 7.

Leidy, J. 1871 C, p. 369. (Cyprinodon.)

Eocene (Green River); Wyoming.

Erismatopterus rickseckeri Cope.*Cope, E. D.* 1871 E, p. 427.

1884 O, p. 81, pl. vi, fig. 2.

Leidy, J. 1872 B, p. 372.

Eocene (Green River); Wyoming.

PERCIDÆ.

Agassiz, L. 1845 A, p. 286. (Percoidæ.)

Bridge, T. W. 1896 A, p. 564.

Brühl, B. C. 1847 A. ("Percoiden.")

Cope, E. D. 1872 C, p. 342.

1883 A.

Gill, T. 1872 C, p. 11.

Günther, A. 1859 A, p. 51.

1880 A, p. 375.

1881 A, p. 688.

Jordan and Evermann 1896 A, p. 1015.

Kölliker, A. 1859 A. (Percoides, part.)

Nicholson and Lydekker 1889 A, p. 1012.

Owen, R. 1845 B, p. 88. ("Percoids.")

1866 A, p. 11 *et seq.*

Parker, W. K. 1868 A, p. 52.

Reis, O. M. 1895 C.

Segond, L. A. 1873 B, p. 528. ("Percoides.")

Zittel, K. A. 1890 A, p. 293.

MIOPILOSUS Cope. Type *M. abbreviatus* Cope.*Cope, E. D.* 1877 I, p. 813.

1884 O, p. 88.

Nicholson and Lydekker 1889 A, p. 1013.

Zittel, K. A. 1890 A, p. 294.

Mioplosus abbreviatus Cope.*Cope, E. D.* 1877 I, p. 813.

1877 Z, p. 570.

1877 A A.

Cope, E. D. 1884 O, p. 88.

Eocene (Green River); Wyoming.

Mioplosus beani Cope.*Cope, L. D.* 1877 I, p. 816.

1877 Z, p. 570.

1877 A A.

1884 O, p. 91, pl. xii, fig. 3.

Eocene (Green River); Wyoming.

Mioplosus labracoides Cope.*Cope, E. D.* 1877 I, p. 814.

1877 Z, p. 570.

1877 AA.

• 1884 O, p. 89, pl. xii, fig. 1.

Eocene (Green River); Wyoming

Mioplosus longus Cope.*Cope, E. D.* 1877 I, p. 815.

1877 Z, p. 570.

1877 AA.

Cope, E. D. 1884 O, p. 90, pl. xii, fig. 2.

Eocene (Green River); Wyoming.

Mioplosus multidentatus Cope.*Cope, E. D.* 1891 H, p. 657.

1892 B, p. 285.

Tertiary (Oligocene?); South Dakota.

Mioplosus sauvageanus Cope.*Cope, E. D.* 1884 O, p. 92.

Eocene (Green River); Wyoming.

PLIOPLARCHUS Cope. Type *P. whitei* Cope.*Cope, E. D.* 1883 A, p. 414.

1884 O, p. 727.

Nicholson and Lydekker 1889 A, p. 1014.

Zittel, K. A. 1890 A, p. 296.

Plioplarchus septemspinosus Cope.*Cope, E. D.* 1889 M, p. 625.

Tertiary, below John Day beds; Oregon

Plioplarchus sexspinosus Cope.*Cope, E. D.* 1883 A, p. 416.*Cope, E. D.* 1884 O, p. 729.

Upper Cretaceous or Lower Tertiary; South Dakota.

Plioplarchus whitei Cope.*Cope, E. D.* 1883 A, p. 414.

1884 O, p. 728, pl. xxiv G, fig. 1.

Upper Cretaceous or Lower Tertiary; South Dakota.

OLIGOPLARCHUS Cope. Type *O. squamipinnis* Cope.*Cope, E. D.* 1891 H, p. 656.**Oligoplarchus squamipinnis** Cope.*Cope, E. D.* 1891 H, p. 656.*Cope, E. D.* 1892 B, p. 285.

Oligocene?; South Dakota?

SPARIDÆ.

Agassiz, L. 1845 A, p. 287. (Sparoidæ.)

Brühl, B. C. 1847 A. ("Sparoiden.")

Cope, E. D. 1872 C, p. 342.

Jordan and Evermann 1898 A, p. 1343.

Köl liker, A. 1859 A. (Sparoidei.)

Owen, R. 1845 B, p. 91. ("Sparoids.")

Segond, L. A. 1873 B, p. 534. ("Sparoides.")

Stannius, H. 1854 A. (Sparoidei.)

CROMMYODUS Cope. Type *Phacodus irregularis* Cope.*Cope, E. D.* 1869 F, p. 243. (Substitute for *Phacodus* Cope, not of Dixon.)*Cope, E. D.* 1869 F, p. 243.

1875 H, p. 362.

Miocene; New Jersey.

Crommyodus irregularis Cope.*Cope, E. D.* 1869 L, p. 311. (*Phacodus*.)*Superfamily SCIÆNOIDEA* Gill.

Gill, T. 1872 C, p. 10.

SCIÆNIDÆ.

Brühl, B. C. 1847 A. ("Sciænoiden.")

Günther, A. 1860 A, p. 265.

1880 A, p. 426.

Jordan and Evermann 1898 A, p. 1392.

Köl liker, A. 1859 A. (Sciænoidei.)

Owen, R. 1845 B, p. 100. ("Sciænoids.")

1866 A, p. 11 *et seq.*

Parker, W. K. 1868 A, p. 50.

Segond, L. A. 1873 B, pp. 531, 534. ("Sciænoides.")

Stannius, H. 1854 A. (Sciænoidei.)

POGONIAS Lacépède. Type *P. fasciatus*=*Labrus cromis* Linn.

Lacépède, 1802, Hist. Nat. Poissons, iii, p. 138.

Günther, A. 1860 A, p. 269.

1880 A, p. 426.

Jordan and Evermann 1898 A, p. 1482.

Pogonias cromis (Linn.).Linnæus, C., 1758, Syst. Nat., ed. x, p. 479. (*Labrus*.)

Günther, A. 1880 A, p. 27, fig. 187.

Jordan and Evermann 1898 A, p. 1482.
 Leidy, J. H. 1855 C, p. 397. (*P. chromis*).
 Recent; Long Island Sound to N. Mexico
 Sands of Ashley River; South Carolina.

Pogonias multidentatus Cope.

Cope, E. D. 1869 L, p. 310.
 Miocene; Virginia.

Pogonias sp. indet.

Wyman, J. 1850 C, p. 234.
 Eocene?; South Carolina.

Suborder PAREIOPLITEÆ Richardson.

Richardson, J., 1836, Fauna bor.-amer., iii, p. 36.
Gill, T. 1889 A, p. 589. (*Acanthopterygii buccis*
loricatis.)

Günther, A. 1860, A, pp. 90, 211. (*Cataphracti*.)
 Jordan & Evermann, 1898 A, p. 1756. (*Loricati* of
 Jenyns, 1835, not *Loricata* of Merrem, 1820.)

Superfamily SCORPENOIDEA Gill.

Gill, T. 1889 A, p. 589.

| *Gill, T.* 1893 A, p. 135.

SCORPÆNIDÆ.

Gill, T. 1860 A, p. 95. (*Scorpænina*).
 1872 C, p. 6.
 Günther, A. 1880 A, p. 412.
 Sauvage, H. E. 1873 A, p. 726. (*Scorpæni*.)

Sauvage, H. E. 1878 B, p. 111.
 Segond, L. 1873 B, p. 532. ("Scorpènes.")
 Zittel, K. A. 1890 A, p. 300.

SEBASTODES Gill. Type *S. paucispinis* (Ayres).

Gill, T., 1861, Proc. Acad. Nat. Sci. Phila., p. 165.
 Cramer, F. 1895 A, p. 573.
Gill, T., 1864, Proc. Acad. Nat. Sci. Phila., p. 145.
 Jordan and Evermann 1898 A, p. 1765.
 Sauvage, H. E. 1878 B, p. 112.

Sebastodes? *rosæ* Eigenmann.

Eigenmann, C. H. 1890 A, p. 17, fig. 1.
 Tertiary; California.

Superfamily COTTOIDEA Gill.

Gill, T. 1872, C, p. 6.
 1889 A, p. 589.

| *Gill, T.* 1893 A, p. 135.

COTTIDÆ.

Bridge, T. W. 1896 A, p. 571.
 Cope, E. D. 1872 C, p. 337.
 Dareste, C. 1872 A, p. 1255. ("Poissons à joues
cuirassées.")
Gill, T. 1872 C, p. 6.
 1889 A.
 1891 A, p. 362.
 Günther, A. 1860 A, p. 152. (*Cottina*.)
 1880 A, p. 476.

Jordan and Evermann 1898 A, p. 1879.
 Nicholson and Lydekker 1889 A, p. 1006.
 Owen, R. 1845 B, p. 90. ("Cottoids," in part.)
 Parker, W. K. 1868 A, p. 43.
 Sauvage, H. E. 1878 B, p. 111. (*Scorpænidæ*, in
 part; *Cottini*.)
 Segond, L. A. 1873 B, p. 533. ("Cottes.")
 Zittel, K. A. 1890 A, p. 310.

COTTUS Linn. Type *C. gobio* Linn.

Linnæus, C., 1758, Syst. Nat., ed. x, p. 264.
 Günther, A. 1860 A, p. 154.
 1890 A, p. 476.
 Jordan and Evermann 1898 A, p. 1941.
 Sauvage, H. E. 1878 B, p. 135.

Cottus cryptotremus Cope.

Cope, E. D. 1883 L, pp. 162, 163.
 Pleistocene (*Equus*); Idaho.

Cottus divaricatus Cope.

Cope E. D. 1883 L, p. 162.
 Pleistocene (*Equus*); Oregon.

Cottus hypoceras Cope.

Cope, E. D. 1883 L, pp. 162, 164.
 Pleistocene (*Equus*); Oregon

Cottus pontifex Cope.

Cope, E. D. 1883 L, pp. 162, 163.
 Pleistocene (*Equus*); Oregon.

ARTEDIELLUS Jordan. Type *Cottus uncinatus* Reinh.

Jordan, D. S. 1885, Cat. Fishes N. A., p. 110.

Jordan and Evermann 1898 A, p. 1905.

Artediellus atlanticus Jord. and Ev.

Jordan and Evermann 1898 A, p. 1906.

Dawson, J. W. 1877 B, p. 341. (*Cottus* sp.)

Dawson, J. W. 1890 A, p. 86. (*Cottus uncinatus*.)

This species is regarded by Jordan and Evermann as being closely related to the European *A. uncinatus*, but probably distinct.

Recent; Labrador to Cape Cod: Pleistocene; Canada.

Superfamily CYCLOPTEROIDEA Gill.

Gill, T. 1889 A, p. 589.

Garman, S. 1892 A. (*Discoboli*.)

1891 A, p. 361.

1893 A, p. 135.

Günther, A. 1861 A, p. 154. (*Discoboli*.)

1880 A, p. 483. (*Discoboli*.)

Hertwig, O. 1881 A. (*Discoboli*.)

Stannius, H. 1854 A. (*Discoboli*.)

CYCLOPTERIDÆ.

Jordan and Evermann 1896 A, p. 2094.

Garman, S. 1892 A, p. 19.

Gill, T. 1872 C, p. 5.

1891 A, p. 366.

CYCLOPTERUS Linn. Type *C. lumpus* Linn.

Linnaeus, C., 1788, Syst. Nat., ed. xi, i, p. 260.

Garman, S. 1892 A, p. 20.

Gill, T. 1891 A, p. 368.

Günther, A. 1861 A, p. 154.

1880 A, p. 484.

Jordan and Evermann 1898 A, p. 2096.

Cyclopterus lumpus Linn.

Linnaeus, C., 1788, Syst. Nat., ed. xi, i, p. 260.

Dawson, J. W. 1877 B, p. 341.

1890 A, p. 86.

Garman, S. 1892 A. p. 21, pl. viii, figs. 1-3, 15-17; pl. ix, fig. 2; pl. x, fig. B; pl. xi, fig. 10; pls. xii, xiii.

Gill, T. 1891 A, p. 368, pls. xxvii, xxx.

Günther, A. 1861 A, p. 155.

1880 A, p. 484, figs. 218, 219.

Jordan and Evermann 1898 A, p. 2096.

Logan, W. E. 1863 A, p. 917.

Recent; eastern and western shores of northern Atlantic: Pleistocene; Ontario, Canada.

Order PLECTOGNATHI.

Cope, E. D. 1872 C, p. 340.

Dareste, C. 1849 A. ("Plectognathes.")

1872 A, p. 1019. ("Plectognathes.")

Gill, T. 1872 C, pp. xl, 1.

1884 D, p. 411.

1893 A, p. 137.

Günther, A. 1870 A, p. 207.

1880 A, p. 683.

Haeckel, E. 1895 A, p. 236.

Hertwig, O. 1881 A.

Hollard, H. 1860 A.

Klein, E. F. 1881 A.

1886 A.

Müller, J. 1846 C, p. 202.

Nicholson and Lydekker 1889 A, p. 1014.

Owen, R. 1866 A, p. 11 *et seq.*

Parker, W. K. 1868 A, p. 33.

Reis, O. M. 1895 C, p. 163.

Stannius, H. 1854 A.

Stephan, P. 1900 A. ("Plectognathes.")

Zittel, K. A. 1890 A, p. 256.

Suborder SCLERODERMI.

Agassiz, L. 1843 B, ii, pp. 248, 265. ("Sclérodernes.")

Gill, T. 1872 C, p. 1.

1884 D, p. 414.

1893 A, p. 137.

Günther, A. 1870 A, p. 207.

1880 A, p. 684.

Hollard, H. 1860 A, p. 31. ("Sclérodernes.")

Jordan and Evermann 1896 A, p. 781.

1898 A, p. 1697.

Müller, J. 1846 C, p. 122.

Owen, R. 1845 B, p. 82. ("Scleroderms.")

1866 A, p. 11.

Zittel, K. A. 1890 A, p. 258.

BALISTIDÆ.

Brühl, B. C. 1847 A. (*Balistes*.)

Cope, E. D. 1872 C, p. 20.

Dareste, C. 1872 A, p. 1174. ("Balistes.")

Gill, T. 1872 C, p. 1.

1884 D, p. 416.

1893 A, p. 137.

Hollard, H. 1853 A, p. 71. ("Balistides.")

Hollard, H. 1854 A, p. 39. ("Balistides.")

1860 A, p. 23. ("Balistides.")

Kölliker, A. 1859 A. (*Balistini*.)

Owen, R. 1846 B, p. 82. (Genus *Balistes*.)

Parker, W. K. 1868 A, pp. 33, 51.

Stannius, H. 1854 A. (*Balistini*.)

Stephan, P. 1900 A. (*Balistides*.)

GRYPODON Hay. Type *Ancistrodon texanus* Dames.

Hay, O. P. 1899 E, p. 790.

The following authors employ the name *Ancistrodon*. It is practically preoccupied.

Dames, W. 1883 A, p. 664.

Nicholson and Lydekker 1889 A, p. 1016.

Roemer, F. 1849 A, p. 419.

1852 A, p. 30.

Schlüter, C. 1881 A, p. 61.

Woodward and Sherborn 1890 A, p. 10.

Zittel, K. A. 1890 A, p. 259.

Grypodon texanus (Dames).

Dames, W. 1883 A, p. 664. (*Ancistrodon*.)

Hay, O. P. 1899 E, p. 790. (*Grypodon*.)

Roemer, F. 1849 A, p. 419. (No specific name.)

1852 A, p. 30, pl. i, fig. 10. (No specific name.)

Woodward, A. S. 1888 I, p. 330. (*Ancistrodon*.)

Cretaceous; Texas.

Suborder GYMNOTONTES.

Agassiz, L. 1843 B, ii, p. 268. ("Gymnotontes.")

Darwint, C. 1849 A.

Gill, T. 1872 C, p. 1.

1884 D, p. 418.

1893 A, p. 138.

Günther, A. 1870 A, pp. 207, 269.

Hollard, H. 1857 A.

1860 A.

Kölliker, A. 1859 A.

Müller, J. 1846 C, p. 203.

Stannius, H. 1854 A.

Superfamily DIODONTOIDEA Gill.

Gill, T. 1884 D, p. 423.

| Gill, T. 1893 A, p. 138.

DIODONTIDÆ.

Cope, E. D. 1872 C, p. 340.

Gill, T. 1884 D, p. 423.

Günther, A. 1870 A, p. 269. (*Tetradontina*.)

1880 A, p. 686. (*Gymnotontes*.)

Hollard, H. 1857 A. ("Diodontiens.")

Jordan and Evermann 1898 A, p. 1742.

Nicholson and Lydekker 1889 A, p. 1015.

Owen, R. 1845 B, p. 77.

Diodon Linn. Type *D. hystrix* Linn.

Linnaeus, C., 1758, Syst. Nat., ed. x, p. 335.

Agassiz, L. 1843 B, ii, p. 273.

Bridge, T. W. 1896 A, p. 582.

Darwint, C. 1849 A.

Günther, A. 1870 A, p. 306.

1880 A, p. 689.

Jordan and Evermann 1898 A, p. 1744.

Owen, R. 1845 B, pp. 14, 77, pl. xxxviii, figs. 1, 2;
pl. xxxix, fig. 2.

1866 A, p. 39.

Parker, W. K. 1868 A, p. 52.

Pictet, F. J. 1854 A, p. 123.

Zittel, K. A. 1890 A, p. 257.

Diodon vetus Leidy.

Leidy, J. 1855 C, p. 397.

Cope, E. D. 1871 M, p. 210. (*D. antiquus*.)

1875 V, p. 31, pl. viii, fig. 6. (*D. antiquus*.)

Leidy, J. 1877 A, p. 255, pl. xxxiv, figs. 15, 16.

Phosphate beds; South Carolina: Miocene;
North Carolina.

Dr. E. Koken, in Zeitschrift deutschen geolog. Gesellsch., vol. xl, pp. 274-305, pls. xvii-xix, has described, from the Tertiary deposits of Alabama and Mississippi, the following list of otolites of fishes, designating the families, in some cases the genera, to which these otolites probably belonged. The word *Otolithus* being evidently not regarded as a generic name, the specific names have no standing in the system of nomenclature.

On the subject of the otolites of fishes see also Higgins, E. T. 1867 A., and Koken, E. 1891 A.

Otolithus (*Carangidarum*) *americanus* Kok., p. 277, pl. xix, figs. 1-3.

Otolithus (*Apogonidarum*) *hospes* Kok., p. 278, pl. xviii, fig. 15.

Otolithus (*Pagelli*) *elegantulus* Kok., p. 279, pl. xvii, figs. 5, 6.

Otolithus (*Sparidarum*) *insuetus* Kok., p. 280, pl. xvii, fig. 9.

Otolithus (*Sciaenidarum*) *radians* Kok., p. 280, pl. xix, figs. 7, 8.

Otolithus (*Sciaenidarum*) *gemma* Kok., p. 281, pl. xix, figs. 9-13.

Otolithus (*Sciaenidarum*) *eporrectus* Kok., p. 282, pl. xviii, figs. 16, 17.

Otolithus (*Sciaenidarum*) *claybornensis* Kok., p. 283, pl. xix, figs. 1-4.

Otolithus (*Sciaenidarum*) *intermedius* Kok., p. 283, pl. xix, figs. 2, 3.

Otolithus (*Sciaenidarum*) *similis* Kok., p. 284, pl. xix, figs. 10, 11, 14.

Otolithus (*Sciaenidarum*) *decipiens* Kok., p. 285, pl. xix, figs. 5, 6.

Otolithus (*Trachini*) *levigatus* Kok., p. 286, pl. xviii, figs. 13, 14.

Otolithus (*Cottidarum*) *sulcatus* Kok., p. 287, pl. xviii, fig. 12.

Otolithus (*Triglae*) *cor* Kok., p. 287, pl. xviii, fig. 10.

- Otolithus* (*Cepolæ*) *comes* Kok., p. 288, pl. xvii, fig. 12.
Otolithus (*Mugilidarum*) *debilis* Kok., p. 288, pl. xvii, fig. 8.
Otolithus (*Gadidarum*) *meyeri* Kok., p. 289, pl. xviii, figs. 8, 9.
Otolithus (*Gadidarum*) *elevatus* Kok., p. 290, pl. xviii, figs. 4, 5.
Otolithus (*Gadidarum*) *mucronatus* Kok., p. 290, pl. xvii, figs. 10, 11.
Otolithus (*Platessæ*) *sector* Kok., p. 292, pl. xvii, figs. 14-16.
Otolithus (*Solæ*) *glaber* Kok., p. 293, pl. xviii, fig. 3.
Otolithus (*Congeris*) *brevior* Kok., p. 293, pl. xviii, fig. 7.
Otolithus (inc. sedis) aff. *umbonata* Kok., p. 294.

Class Amphibia

Class BATRACHIA Macartney.

1758 Linnaeus Syst Nat 10^{ed} I p 194

Macartney, J., 1802, Lectures on Comp. Anat., i. tab. 3.

This class of animals is designated by some of the following authors *Batrachia*; by others, *Amphibia*.

- Baur, G. 1886 B, p. 360.
 1888 C, p. 2.
 1896 C, p. 664.
 Beard, J. 1890 A.
 Born, G. 1876 A
 1880 A.
 Boulenger, G. A. 1892 A.
 1892 B.
 Calori, L. 1894 A.
 Cope, E. D. 1868 J.
 1869 M, p. 3.
 1875 D.
 1879 A, p. 33.
 1884 I, p. 44.
 1884 O, p. 100.
 1884 P.
 1884 HH.
 1885 G.
 1887 S, p. 331.
 1888 H.
 1888 O.
 1888 AA, p. 244.
 1889 D.
 1889 R, p. 860.
 1891 N, p. 28.
 1892 D, p. 211.
 1892 N.
 1898 B, p. 43.
 Cuvier, G. 1834 A, x, pp. 265, 386, pls. cciii-cciv.
 Gadow, H. 1896 A.
 1898 A, p. 12.
 Gaupp, E. 1891 A.
 1894 A.
 1900 A.
 Gegenbaur, C. 1865 B, p. 52.
 1876 A.
 1898 A.
 Gill, T. 1900 A, p. 730.
 Goepfert, E. 1895 B.
 1896 A.

- Haeckel, E. 1895 A, p. 266.
 Hancock and Atthey 1868 A, p. 266.
 Hasse, C. 1893 A.
 Hay, O. P. 1895 A.
 1899 F, p. 682.
 Hoffmann, C. K. 1874 A.
 1876 A.
 1878 A.
 Howes, G. B. 1888 A.
 1888 B.
 Huxley, T. H. 1867 B.
 1870 A.
 1872 A, p. 149.
 1875 A.
 1875 C.
 1876 B, xiii, pp. 411, 429.
 Kehrer, G. 1886 A, p. 73.
 Kingsley and Ruddick 1900 A, p. 227.
 Köstlin, O. 1844 A.
 Levy, H. 1898 A.
 Leydig, F. 1876 A.
 Lydekker, R. 1890 A, p. 121.
 Marsh, O. C. 1877 E.
 1898 B, p. 408.
 Müller, J. 1831 A, p. 199. (Nuda.)
 Nicholson and Lydekker 1889 A, p. 1018.
 Osborn, H. F. 1899 I, p. 156.
 Owen, R. 1842 A, p. 181.
 1845 B, p. 187.
 1860 A, pp. 154, 160.
 1866 A.
 Parker, W. K. 1868 A, p. 58.
 1879 B, pp. 31, 61.
 Peters, K. 1895 A.
 Stannius, H. 1856 A. (*Amphibia dipnoa*.)
 Steinmann and Döderlein 1890 A, p. 601.
 Walter F. 1887 A.
 Wiedersheim, R. 1876 A.
 1887 A.
 1889 A, p. 432.
 1890 A, p. 19.
 Woodward, A. S. 1898 B, p. 122.
 Zittel, K. A. 1890 A, pp. 337, 432.
 Zwick, W. 1897 A.

Order STEGOCEPHALI Cope.

- Cope, E. D. 1868 J, p. 209.
 Baur, G. 1886 H.
 1886 M, p. 304.
 1889 F, p. 469.
 1894 A.
 1896 C.

- Burkhardt, R. 1895 A.
 Cope, E. D. 1869 M, p. 6.
 1875 D, pp. 352-356.
 1875 X, p. 40.
 1884 P, p. 26.
 1885 G, p. 243.

- Cope, E. D. 1887 S. (Rhachitomi, Embolomeri, Stegocephali.)
 1888 V.
 1888 AA, p. 248.
 1889 R, p. 861.
 1891 N, p. 28.
 1892 Z.
 1895 C, p. 856.
 1898 B, p. 43.
 Credner, H. 1881 A.
 1882 A.
 1883 A.
 1885 A.
 1886 A.
 1887 A.
 1888 A, p. 555.
 1889 A.
 1890 A.
 1893 A.
 Fraas, E. 1889 A, p. 8.
 Fritsch, A. 1883 A (1879), p. 68.
 Gadow, H. 1896 A, p. 23.
 1898 A, p. 12.
 Gaupp, E. 1894 A.
 1895 B, p. 56.
 Gegenbaur, C. 1895 A, p. 8.
 Gegenbaur, C. 1898 A.
 Geinitz and Deichmüller 1882 A.
 Goeppert, H. 1896 A, p. 431.
 Haeckel, E. 1895 A, p. 273.
 Hay, O. P. 1899 F, p. 682.
 Jaekel, O. 1896 B, p. 129.
 Kehner, F. A. 1876 A.
 Lortet, L. 1892 A, p. 125.
 Lydekker, R. 1890 A, p. 139. (Labyrinthodontia.)
 Maggi, L. 1898 A.
 Miall, L. C. 1874 A. (Labyrinthodontia.)
 1875 A. (Labyrinthodontia.)
 Nicholson and Lydekker 1889 A, p. 1021. (Labyrinthodontia.)
 Osborn, H. F. 1899 I, p. 157.
 1900 A, p. 4.
 Pollard, H. B. 1892 A, p. 408.
 Röse, C. 1897 A, p. 48.
 Rohon, J. V. 1899 B, p. 13. ("Stegocephalen.")
 Seeley, H. G. 1888 D, p. 95. (Labyrinthodontia.)
 1892 A, p. 333. (Labyrinthodontia.)
 Steinmann and Döderlein 1890 A, p. 603.
 Wiedersheim, R. 1878 A, p. 38.
 Woodward, A. S. 1898 B, p. 123. (Stegocephalia.)
 Zittel, K. A. 1890 A, p. 344.

Suborder MICROSAURIA

Cope. Dawson 1863

- Cope, E. D. 1868 J, p. 210.
 Baur, G. 1897 B.
 Case, E. C. 1898 B, p. 505.
 Cope, E. D. 1868 J, p. 210. (Xenorhachia.)
 1869 M, pp. 6, 8. (Microsauria, Xenorhachia.)
 1875 D, p. 356. (Microsauria, Xenorhachia.)
 1882 B, p. 452.
 1888 V. (Lepospondyli.)
 1889 D, p. 13. (Stegocephali.)
 1889 R, p. 861.
 1891 N, pp. 28, 30.
 1898 B, pp. 43, 47.
 Dawson, J. W. 1892 A.
 1895 A, p. 73.
 Fraas, E. 1889 A, p. 8. (Lepospondyli.)
 Fritsch, A. 1883 A (1879), pp. 33, 58. (Microsauria aistopoda.)
 Fritsch, A. 1889 B (1885), p. 73.
 Fürbringer, M. 1900 A, p. 284.
 Gadow, H. 1898 A, p. 12. (Lepospondyli.)
 Haeckel, E. 1895 A, p. 268 (Lepospondyli); p. 274 (Progonamphibia).
 Hay, O. P. 1895 A, p. 45. (Lepospondyli.)
 Lydekker, R. 1890 A, p. 196 (Microsauri); p. 205 (Aistopoda); p. 205 (Branchiosauria).
 Miall, L. C. 1890 A, p. 151. (Microsauria, Aistopoda, Nectridia, Heleothrepta.)
 Nicholson and Lydekker 1889 A, p. 1025.
 Osborn, H. F. 1899 I, p. 156.
 Wiedersheim, R. 1878 A, p. 39.
 Woodward, A. S. 1898 B, p. 127 (Branchiosauria); p. 129 (Aistopoda); p. 130 (Microsauria).
 Zittel, K. A. 1890 A, p. 370. (Lepospondyli.)

PROTRITONIDÆ.

Nicholson and Lydekker 1889 A, pp. 1022, 1039.

Unless otherwise indicated the following authors refer to this family under the name *Branchiosauridæ*. If *Pelion* really belongs to this family the family name should be *Peliontidæ*. References to *Branchiosaurus* are also added.

- Baur, G. 1888 C, p. 63. (Branchiosaurus.)
 Cope, E. D. 1875 X, p. 11. (Peliontidæ.)
 Credner, H. 1881 A. (Branchiosaurus.)
 1881 B. (Branchiosaurus.)
 1883 A. (Branchiosaurus.)
 1884 A. (Branchiosaurus.)

- Credner, H. 1887 A. (Branchiosaurus.)
 Fritsch, A. 1876, A, p. 72. (Branchiosaurus.)
 1883 A (1879), p. 69.
 1883 A (1880), p. 93.
 Gadow, H. 1896 A, p. 23. (Branchiosaurus.)
 Gaudry, A. 1883 A, p. 253. (Protriton, Branchiosaurus.)
 Hay, O. P. 1895 A, p. 45.
 Jaekel, O. 1896 A, p. 1. (Branchiosaurus.)
 Lydekker, R. 1890 A, p. 210. (Protritonidæ.)
 Maggi, L. 1898 A, figs. 1, 3. (Branchiosaurus.)
 Zittel, K. A. 1890 A, p. 370.

Air Breathers of the Coal Period
 Montreal 1863 Dawson

SPARODUS Fritsch. Type *S. validus* Fritsch.

Fritsch, A. 1876 A, p. 73.

Dawson, J. W. 1882 A, p. 643, pl. xl, figs. 52-56.

1895 A, p. 75.

Fritsch, A. 1876 A, p. 76. (Batrachocephalus, preoccupied.)

1883 A (1879), p. 84.

Gadow, H. 1896 A, p. 28.

Lydekker, R. 1890 A, p. 212.

Zittel, K. A. 1890 A, p. 375.

It is doubtful to which family this genus belongs.

Sparodus sp. indet.

Dawson, J. W. 1895 A, p. 75.

Coal-measures; Nova Scotia.

AMPHIBAMUS Cope. Type *A. grandiceps* Cope. ✓

Cope, E. D. 1865 A.

Baur, G. 1888 C, p. 63.

Cope, E. D. 1866 C.

1869 M, pp. 7, 8.

Fritsch, A. 1883 A (1879), p. 60.

Miall, L. C. 1875 A, p. 181.

Miller, S. A. 1889 A, p. 618.

Zittel, K. A. 1890 A, p. 375.

This genus may belong among the *Hylonomidae*.**Amphibamus grandiceps** Cope.

Cope, E. D. 1865 A.

1866 C, p. 135, pl. xxxii and text figure.

1869 M, p. 8.

Dana, J. D. 1896 A, p. 683, fig. 1108.

Fritsch, A. 1883 A (1880), p. 93, fig. 44.

Hay, O. P. 1900 A, p. 120.

Miller, S. A. 1889 A, p. 618, fig. 1178.

Coal-measures; Illinois.

PELION Wyman. Type *P. lyellii* Wyman. ✓Wyman, J., in Cope, E. D. 1868 J., p. 211. (To replace *Raniceps* Wyman, preoccupied by Cuvier and Kirby.)

Cope, E. D. 1869 M, p. 9.

1874 L, p. 269.

1875 D, p. 389.

1875 X, p. 11.

1880 A, p. 50.

Fritsch, A. 1883 A (1879), p. 64.

Huxley, T. H. 1863 A, p. 67. (*Raniceps*.)

Miall, L. C. 1875 A, p. 189.

Miller, S. A. 1889 A, p. 624.

Wyman, J. 1858 A, p. 160. (*Raniceps*.)

Zittel, K. A. 1890 A, p. 375.

Pelion lyellii Wyman.Wyman, J. 1858 A, p. 160, fig. 1. (*Raniceps*.)

Cope, E. D. 1869 M, p. 9.

1874 L, p. 269.

1875 D, p. 390, pl. xxxvi, fig. 1.

Dana, J. D. 1896 A, p. 683, fig. 1109.

Fritsch, A. 1883 A (1879), p. 94, fig. 45.

Gaudry, A. 1875 A.

Lesley, J. P. 1889 A, p. 613, figure.

Miller, S. A. 1889 A, p. 624, fig. 1190.

Newberry, J. S. 1868 A, p. 144. (*Raniceps*.)

Wyman, J., in Cope, E. D. 1868 J, p. 211.

Coal-measures; Ohio.

MOLGOPHIDÆ.

Cope, E. D. 1875 D, p. 357.

1875 D, p. 357. (*Phlegethontiidae*.)1875 X, p. 11. (*Phlegethontiidae*, *Molgophidæ*.)Fritsch, A. 1876 A, p. 72. (Genus *Dolichosoma*.)1883 A (1879), p. 107. (*Aistopoda*.)Lydekker R. 1890 A, p. 205. (*Dolichosomatidae*.)Miall, L. 1875 A, pp. 151, 171. (*Aistopoda*.)Nicholson and Lydekker 1889 A, p. 1024. (*Dolichosomatidae*.)Wiedersheim, R. 1878 A, p. 42. (*Phlegethontiidae*, *Molgophidæ*.)Zittel, K. A. 1890 A, p. 383. (*Aistopoda*.)PHLEGETHONTIA Cope. Type *P. linearis* Cope.

Cope, E. D. 1871 L.

1872 JJ.

1874 L, p. 262.

1875 D, pp. 357, 366.

Fritsch, A. 1883 A (1879), p. 64.

Miall, L. C. 1875 A, p. 190.

Miller, S. A. 1889 A, p. 624.

Nicholson and Lydekker 1889 A, p. 1024.

Zittel, K. A. 1890 A, p. 383.

✓ **Phlegethontia linearis** Cope.

Cope, E. D. 1871 L.

1874 L, p. 262.

1875 D, p. 367, pl. xliii, figs. 1, 2.

Fritsch, A. 1883 A (1879), p. 107, fig. 54.

Lesley, J. P. 1889 A, p. 634, figure.

Miller, S. A. 1889 A, p. 624, fig. 1191.

Coal-measures; Ohio.

✓ **Phlegethontia serpens** Cope. ✓

Cope, E. D. 1874 L, 263.

1871 L. (No description.)

1875 D, p. 367, pl. xxxii, fig. 2.

Fritsch, A. 1883 A (1879), p. 107, fig. 53.

Lesley, J. P. 1889 A, p. 635, figure.

Coal-measures; Ohio.

MOLGOPHIS Cope. Type *M. macrurus* Cope.

- Cope, E. D. 1868 J, p. 220.
 1869 M, p. 20.
 1874 L, p. 263.
 1875 D, p. 368.

Fritsch, A. 1883 A (1879), p. 63.

Miall, L. C. 1875 A, p. 188.

Miller, S. A. 1889 A, p. 623.

Nicholson and Lydekker 1889 A, p. 1024.

Zittel, K. A. 1890 A, p. 383.

Molgophis brevicostatus Cope.

Cope, E. D. 1875 D, p. 369, pl. xlv, fig. 1.

Fritsch, A. 1883 A (1879), p. 107, fig. 55.

Miller, S. A. 1889 A, p. 623, fig. 1188.

Coal-measures; Ohio.

Molgophis macrurus Cope.

Cope, E. D. 1868 J, p. 220.

1869 M, p. 21.

1875 D, p. 368, pl. xliii, fig. 3.

Wyman, J. 1858 A, p. 160, fig. 1. (No name. May be not this species.)

Coal-measures; Ohio.

Molgophis wheatleyi Cope.

Cope, E. D. 1874 L, p. 263.

1875 D, p. 369, pl. xlv, fig. 1.

Coal-measures; Ohio.

HYLONOMIDÆ.

Fritsch, A. 1883 A, p. 159.

Lydekker, R. 1890 A, p. 201.

Nicholson and Lydekker 1889 A, p. 1027. (Hyloplestonidæ.)

Steinmann and Döderlein 1890 A, p. 608.

HYLONOMUS Dawson. Type *H. lyelli* Dawson.

Dawson, J. W. 1860 A, p. 274.

Baur, G. 1897 B.

Cope, E. D. 1871 A, p. 9.

Credner, H. 1885 A, p. 274.

1890 A.

Dawson, J. W. 1863 A, pp. 430, 446.

1863 B.

1863 D, pp. 160, 163, 281.

1868 A, p. 370.

1882 A, p. 634.

1891 B, p. 154.

1894 A, p. 279.

1895 A, p. 73.

Fritsch, A. 1883 A (1879), p. 59.

1883 A (1883), p. 159 (Hylonomus); p. 160 (Hylopleston).

Fürbringer, M. 1900 A, pp. 286, 296, 554.

Gadow, H. 1896 A, p. 28.

Huxley, T. H. 1863 A, p. 67.

Lydekker, R. 1890 A, p. 201.

Miall, L. C. 1875 A, p. 173.

Miller, S. A. 1889 A, p. 622.

Nicholson and Lydekker 1889 A, p. 1027.

Steinmann and Döderlein 1890 A, p. 608.

Woodward, A. S. 1898 B, p. 131. (Hylopleston, Hylonomus.)

Zittel, K. A. 1890 A, p. 376.

Hylonomus latidens Dawson.

Dawson, J. W. 1882 A, p. 637, pl. xxxix, figs. 18-22.

1895 A, p. 74.

Lydekker, R. 1890 A, p. 224.

Coal-measures; Nova Scotia.

Hylonomus lyelli Dawson.

Dawson, J. W. 1860 A, p. 274, figs. 14-18.

Cope, E. D. 1871 A, p. 9.

Dawson, J. W. 1862 A.

1863 A, pp. 430, 446.

Dawson, J. W. 1863 C, p. 439.

1863 D, pp. 167, 281, pls. iv, figs. 23-31; pl. v, figs. 1-29.

1868 A, p. 370, fig. 144.

1878 A, p. 370; suppl., p. 61.

1882 A, p. 635, pl. xxxix, figs. 1-14; pl. xlv, fig. 140.

1891 A, pl. viii.

1891 B, p. 149.

1894 A, p. 279.

1894 B, p. 6.

1895 A, p. 74.

Lesley, J. P. 1889 A, p. 290, figures.

Lydekker, R. 1890 A, p. 222.

Miall, L. C. 1875 A, p. 173.

Owen, R. 1862 A, p. 238, pl. ix, figs. 1-5.

Coal-measures; Nova Scotia.

Hylonomus multidens Dawson.

Dawson, J. W. 1882 A, p. 637, pl. xxxix, figs. 23-26.

1895 A, p. 74.

Coal-measures; Nova Scotia.

Hylonomus wymani Dawson.

Dawson, J. W. 1860 A, p. 277, figs. 27-29.

Cope, E. D. 1871 A, p. 9.

Dawson, J. W. 1862 A.

1863 A, p. 430.

1863 C, p. 439.

1863 D, pp. 270, 282, pl. vi, figs. 18-31.

1868 A, p. 378, figs. 146a-i.

1878 A, p. 378, figs. 146a-i.

1882 A, p. 637, pl. xxxix, figs. 15-17.

1894 A, p. 279.

1895 A, p. 74.

Lesley, J. P. 1889 A, p. 291, figure.

Lydekker, R. 1890 A, p. 224.

Miall, L. C. 1875 A, p. 174.

Owen, R. 1862 A, p. 240, pl. ix, figs. 11-15.

Coal-measures; Nova Scotia.

SMILERPETON Dawson. Type *Hylonomus acidentatus* Dawson.*Dawson, J. W.* 1882 A, p. 634.

1894 A, p. 279.

1895 A, p. 74.

Gadow, H. 1896 A, p. 28.

Lydekker, R. 1890 A, p. 224. (*Smilerpetum*.)

Nicholson and Lydekker 1889 A, p. 1027.

Zittel, K. A. 1890 A, p. 376.

Smilerpeton acidentatum* Dawson.Dawson, J. W.* 1860 A, p. 275, figs. 19-23. (*Hylonomus*.)Cope, E. D. 1871 A, p. 9. (*Hylonomus*.)*Dawson, J. W.* 1862 A. (*Hylonomus*.)1863 B, p. 473. (*Hylonomus*.)1863 C, p. 439. (*Hylonomus*.)*Dawson, J. W.* 1863 D, pp. 268, 287, pl. vi, figs. 1-16. (*Hylonomus*.)1868 A, p. 376, fig. 145a-i. (*Hylonomus*.)1878 A, p. 376, figs. 145a-i. (*Hylonomus*.)

1882 A, p. 638, pl. xi, figs. 28-45.

1894 A, p. 279.

1895 A, p. 75.

Lesley, J. P. 1889 A, p. 289, figure. (*Hylonomus*.)Lydekker, R. 1890 A, p. 224. (*Smilerpetum*.)

Miall, L. C. 1875 A, p. 174.

Miller, S. A. 1889 A, p. 622, fig. 1186. (*Hylonomus*.)

Owen, R. 1862 A, p. 239, pl. ix, fig. 6.

Coal-measures; Nova Scotia.

HYLERPETON Owen. Type *H. dawsonii* Owen.*Owen, R.* 1862 A, p. 241.*Dawson, J. W.* 1876 A, p. 443.

1878 A, suppl., p. 58.

1882 A, p. 634.

1895 A, p. 74.

Fritsch, A. 1883 A (1879), p. 59.

Huxley, T. H. 1863 A, p. 67.

Lydekker, R. 1890 A, p. 224. (*Hylerpetum*.)

Miall, L. C. 1875 A, p. 174.

Miller, S. A. 1889 A, p. 622.

Zittel, K. A. 1890 A, p. 376.

Hylerpeton dawsonii* Owen.Owen, R.* 1862 A, p. 241, pl. ix.

Cope, E. D. 1869 M, p. 13.

Dawson, J. W. 1863 A, p. 431.

1863 B, p. 473.

1863 C, p. 439.

1863 D, pp. 272, 282, pl. vi, figs. 32-46.

1868 A, p. 380, fig. 147.

1876 A, pp. 442, 443.

1878 A, p. 380, figs. 147a-d; suppl., p. 58.

Dawson, J. W. 1882 A, p. 639, pl. xli, figs. 62-85.

1894 B, p. 6.

1895 A, p. 74.

Gadow, H. 1896 A, p. 28.

Lesley, J. P. 1889 A, p. 289, figure.

Lydekker, R. 1890 A, p. 225.

Miall, L. C. 1875 A, p. 194.

Miller, S. A. 1889 A, p. 622, fig. 1185.

Coal-measures; Nova Scotia.

Hylerpeton intermedium* Dawson.Dawson, J. W.* 1895 A, p. 75.

Coal-measures; Nova Scotia.

Hylerpeton longidentatum* Dawson.Dawson, J. W.* 1876 A, p. 444.

1878 A, suppl., p. 58.

1882 A, p. 640, pl. xliii, figs. 86-109.

1894 B, p. 6.

1895 A, p. 74.

Lydekker, R. 1890 A, p. 225.

Coal-measures; Nova Scotia.

FRITSCHIA Dawson. Type *Hylerpeton curtidentatum* Dawson.*Dawson, J. W.* 1882 A, p. 634.

1895 A, p. 75.

Lydekker, R. 1890 A, p. 225.

Zittel, K. A. 1890 A, p. 381.

Fritschia curtidentata* Dawson.Dawson, J. W.* 1876 A, p. 444. (*Hylerpeton*.)*Dawson, J. W.* 1878 A, suppl., p. 59. (*Hylerpeton*.)

1882 A, p. 641, pl. xliii, figs. 110-128.

1895 A, p. 75.

Lydekker, R. 1890 A, p. 225.

Coal-measures; Nova Scotia.

BRACHYDECTES Cope. Type *B. newberryi* Cope.*Cope, E. D.* 1868 J, p. 214.

1869 M, p. 14.

1874 L, p. 268.

1875 D, pp. 357, 388.

Dawson, J. W. 1891 B, p. 153.

Fritsch A. 1883 A (1879), p. 61

Miall, L. C. 1875 A, p. 184.

Miller, S. A. 1889 A, p. 619.

Zittel, K. A. 1890 A, p. 377.

Brachydictes newberryi* Cope.Cope, E. D.* 1868 J, p. 214.

1869 M, p. 14.

1874 L, p. 269.

1875 D, p. 388, pl. xxvii, fig. 1.

Miall, L. C. 1875 A, p. 184.

Miller, S. A. 1889 A, p. 619, fig 1180.

Coal-measures; Ohio.

PTYONIIDÆ.

Cope, E. D. 1875 D, p. 357.

1875 X, p. 11.

Fritsch, A. 1883 A (1880), p. 127. (Nectridea.)

Lydekker, R. 1890 A, p. 196. (Urocordylidæ.)

Miall, L. C. 1875 A, p. 168. (Nectridea.)

Nicholson and Lydekker 1889 A, p. 1025. (Urocordylidæ.)

Wiedersheim, R. 1878 A, p. 42.

KERATERPETON Huxley. Type *K. galvani* Huxley.

Huxley, T. H. 1867 B, p. 354.

Andrews, C. W. 1895 A.

Cope, E. D. 1875 D, p. 371. (Ceraterpeton.)

Fritsch, A. 1883 A (1879), p. 57; p. 136 (1881).

Lydekker, R. 1890 A, p. 197. (Ceraterpeton.)

Maggi, L. 1898 A, fig. 10.

Miall, L. C. 1875 A, p. 170.

Miller, S. A. 1889 A, p. 619. (Ceraterpeton.)

Osborn, H. F. 1898 K, p. 165. (Ceraterpeton.)

Woodward, A. S. 1898 B, p. 132.

Zittel, K. A. 1890 A, p. 379.

Keraterpeton divaricatum Cope.

Cope, E. D. 1885 D, p. 406. (Ceraterpeton.)

Coal-measures; Ohio.

Keraterpeton punctolineatum Cope.

Cope, E. D. 1875 J. (Ceraterpeton punctolineatum.)

1875 D, p. 372 (C. lineopunctatum); pl. xli, fig. 4 (C. punctolineatum).

Coal-measures; Ohio.

Keraterpeton tenuicorne Cope.

Cope, E. D. 1875 D, p. 372 (Ceraterpeton lennicorne, *err. typ.*); pl. xlii, fig. 1 (C. recticorne, *err. typ.*). 2

1885 D, p. 407. (Ceraterpeton tenuicorne.)

1897 C, p. 85, pl. iii, fig. 2. (Ceraterpeton.)

Osborn, H. F. 1898 K, p. 165. (C. lennicorne.)

Coal-measures; Ohio, Pennsylvania.

OËSTOCEPHALUS Cope. Type *O. amphiuminus* Cope = *O. remex* Cope.

Cope, E. D. 1869 J, p. 218.

1869 M, p. 16.

1871 L.

1872 J.J.

1874 L, p. 266.

1875 D, p. 380.

Fritsch, A. 1883 A (1879), p. 57. (Syn.? of Urocordylus.)

Huxley, T. H. 1867 B, p. 359, pl. xx, figs. 1, 2. (Urocordylus.)

Miall, L. C. 1875 A, p. 169. (Syn. of Urocordylus.)

Miller, S. A. 1889 A, p. 623.

Newberry, J. S. 1868 A, p. 144. (Urocordylus.)

Nicholson and Lydekker 1889 A, p. 1025. (Urocordylus.)

Zittel, K. A. 1890 A, p. 381.

This genus is probably identical with *Urocordylus* Huxley.

Oëstocephalus rectidens Cope.

Cope, E. D. 1874 L, p. 268.

Cope, E. D. 1875 D, p. 386, pl. xxvii, figs. 3, 4.

Miall, L. C. 1875 A, p. 170.

Miller, S. A. 1889 A, p. 623, fig. 1189.

Coal-measures; Ohio.

Oëstocephalus remex Cope.

Cope, E. D. 1868 J, p. 217. (Sauropleura.)

1868 J, p. 219. (O. amphiuminus.)

1869 M, pp. ii, 17, fig. 2.

1871 G, p. 41. (O. remex and O. amphiuminus.) ✓

1871 O.

1874 L, p. 268.

1875 D, pp. 366, 381, pl. xxvii, fig. 5?; pl. xxxi, fig. 1; pl. xxxii, fig. 1; pl. xxxiii, fig. 2; pl. xxxiv, fig. 4?.

Fritsch, A. 1883 A (1881), p. 128, fig. 72.

Miall, L. C. 1875 A, p. 170.

Coal-measures; Ohio.

PTYONIUS Cope. Type not designated.

Cope, E. D. 1874 L, p. 264.

1875 D, p. 373.

Fritsch, A. 1883 A. (1879); p. 57. (Syn.? of Urocordylus.)

Miall, L. C. 1875 A, p. 169. (Syn. of Urocordylus.)

Miller, S. A. 1889 A, p. 625.

Zittel, K. A. 1890 A, p. 381.

This genus is probably identical with *Urocordylus* Huxley.

Ptyonius marshii Cope.

Cope, E. D. 1869 M, p. 24. (Colosteus.)

1871 L, p. 177. (Oëstocephalus.)

1874 L, p. 265.

1875 D, p. 375, pl. xxvii, fig. 6; pl. xxvii, figs.

2a, 3.

Lesley, J. P. 1889 A, p. 841, figure.

Miall, L. C. 1875 A, p. 170.

Coal-measures; Ohio.

Ptyonius nummifer Cope.

Cope, E. D. 1875 D, p. 374, pl. xli, figs. 2, 3.

Lesley, J. P. 1889 A, p. 842, figures. ✓

Coal-measures; Ohio.

Ptyonius pectinatus Cope.

Cope, E. D. 1868 J, p. 216. (Sauropleura.)

1869 M, p. 20. (Oëstocephalus.)

1874 L, p. 266.

1875 D, p. 377, pl. xxvii, fig. 7; pl. xxviii, figs. 2, 4, 6; pl. xxix, fig. 2; pl. xxx, fig. 2; pl. xxxv, figs. 1-3; pl. xli, fig. 1.

Fritsch, A. 1895 B, p. 3. (*P. pectinatus*?)

Lesley, J. P. 1889 A, p. 843, figures.

Miall, L. C. 1875 A, p. 170.

Coal-measures; Ohio; Bohemia?

***Ptyonius serrula* Cope.**

Cope, E. D. 1874 L, p. 266.

1871 L, p. 177. (*Oestocephalus serrula*; no description.)

1875 D, p. 379, pl. xxviii, fig. 5?; pl. xxx, fig. 1.

Lesley, J. P. 1889 A, p. 844, figure.

Miall, L. C. 1875 A, p. 170.

Miller, S. A. 1889 A, p. 625, fig. 1192.

Coal-measures; Ohio.

***Ptyonius vinchellianus* Cope.**

Cope, E. D. 1874 L, p. 265.

1871 L. (*Oestocephalus vinchellianus*; no description.)

1875 D, p. 376, pl. xxviii, fig. 1.

Fritsch, A. 1883 A (1881), p. 128, fig. 71.

Lesley, J. P. 1889 A, p. 844, figure. (*P. vinchellianus*.)

Miall, L. C. 1875 A, p. 170.

Coal-measures; Ohio.

CTENERPETON Cope. Type *C. alveolatum* Cope.

Cope, E. D. 1897 C, p. 83.

***CtenERPeton alveolatum* Cope. X**

Cope, E. D. 1897 C, p. 83, pl. iii, fig. 1A.

Coal-measures; Pennsylvania.

TUDITANIDÆ.

Cope, E. D. 1875 D, p. 357.

1875 X, p. 11 (*Tuditaniidæ*); p. 12 (*Cocytinidæ*).

Fritsch, A. 1883 A, p. 173. (*Microbrachidæ*.)

Nicholson and Lydekker 1889 A, p. 1027. (*Microbrachidæ*.)

Wiedersheim, R. 1878 A, p. 42.

TUDITANUS Cope. Genus based on *T. punctulatus* and *T. brevirostris*.

Cope, E. D. 1874 L, p. 271.

1871 L. (No definition; no described species.)

1872 JJ. (No definition; no described species.)

1875 D, p. 391.

1896 C.

Fritsch, A. 1883 A (1879), p. 65.

1883 A, p. 173.

Miall, L. C. 1875 A, p. 191.

Miller, S. A. 1889 A, p. 626.

Nicholson and Lydekker 1889 A, p. 1027.

Zittel, K. A. 1890 A, p. 378.

Cope, E. D. 1875 D, p. 395.

Miller, S. A. 1889 A, p. 627. (Syn. of *Keraterpeton punctolineatum*.)

Coal-measures; Ohio.

***Tuditanus obtusus* Cope.**

Cope, E. D. 1868 J, p. 213. (*Dendrerpeton*.)

1869 M, pp. 8, 12, fig. 1. (*Dendrerpeton*.)

1874 L, p. 274.

1875 D, p. 396.

1885 D, p. 407.

Coal-measures; Ohio.

***Tuditanus punctulatus* Cope.**

Cope, E. D. 1874 L, p. 271.

1875 D, p. 392, pl. xxxiv, fig. 1. (*T. longipes* on expl. of plate by error.)

1896 C.

1897 C, p. 88. (*Isodectes*.)

1898 B, p. 61. (*Isodectes*.)

Fritsch, A. 1883 A, p. 173, fig. 110.

Coal-measures; Ohio.

***Tuditanus radiatus* Cope.**

Cope, E. D. 1874 L, p. 273.

1875 D, p. 394, pl. xxvii, fig. 1; pl. xxxiv, fig. 3; text, fig. 10.

Lesley, J. P. 1890 A, p. 1238, figure.

Miller, S. A. 1889 A, p. 626, fig. 1194.

Coal-measures; Ohio.

***Tuditanus tabulatus* Cope.**

Cope, E. D. 1877 A, p. 577.

Coal-measures; Ohio.

¹ On plate and explanation this species is called *C. foveolatum*.

mordax = *Diceratosaurus punctolineatum*
1877 A. p. 570

COCYTINUS Cope. Type *C. gyrinoides* Cope.*Cope, E. D.* 1871 L.

1872 JJ.

1874 L, p. 276.

1875 D, p. 360.

1875 X, p. 12.

Fritsch, A. 1883 A (1879), p. 61; p. 173 (1883).

Miall, L. C. 1875 A, p. 185.

Miller, S. A. 1889 A, p. 619.

Nicholson and Lydekker 1889 A, p. 1027.

Zittel, K. A. 1890 A, p. 378.

The family position of this genus is doubtful.

Cocytinus gyrinoides Cope.*Cope, E. D.* 1871 L.

1874 L, p. 278.

1875 D, p. 364, pl. xxxix, fig. 4. ✓

Fritsch, A. 1883 A, p. 173, fig. 111.

Miller, S. A. 1889 A, p. 620, fig. 1182.

Coal-measures; Ohio.

DIPLOCAULIDÆ.

Cope, E. D. 1881 K, p. 163.*Cope, E. D.* 1882 B, p. 452.DIPLOCAULUS Cope. Type *D. salamandroides* Cope.*Cope, E. D.* 1877 E, p. 187.

1881 K, p. 163.

1882 B, p. 451.

Miller, S. A. 1889 A, p. 621.

Zittel, K. A. 1890 A, p. 382.

Case, E. C. 1900 A, p. 710.

Cope, E. D. 1882 HH.

1888 BB, p. 286.

1896 G, p. 455, pl. ix.

Permian; Texas. ✓

Diplocaulus salamandroides Cope.*Cope, E. D.* 1877 E, p. 187.

Case, E. C. 1900 A, p. 710, pl. i, figs. 16a-17b.

Cope, E. D. 1881 K, p. 163.

1888 BB, p. 286.

Permian; Illinois.

Diplocaulus limbatus Cope.*Cope, E. D.* 1896 G, p. 456.

Permian; Texas.

Diplocaulus magnicornis Cope.*Cope, E. D.* 1882 B, p. 453.

LEPOSPONDYLOUS GENERA OF UNCERTAIN POSITION.

AMBLYODON Dawson. Type *A. problematicum* Dawson.*Dawson, J. W.* 1882 A, p. 635.**Amblyodon problematicus** Dawson.*Dawson, J. W.* 1882 A, p. 644, pl. xl, figs. 57-61.*Dawson, J. W.* 1895 A, p. 75.

Coal-measures; Nova Scotia.

HYPHASMA Cope. Type *H. lævis* Cope.*Cope, E. D.* 1875 J.

1875 D, p. 387.

Fritsch, A. 1883 A (1881), p. 127.

Miller, S. A. 1889 A, p. 622.

Zittel, K. A. 1890 A, p. 382.

Hyphasma lævis Cope.*Cope, E. D.* 1875 J.

1875 D, p. 387, pl. xxxvii, fig. 4.

Miller, S. A. 1889 A, p. 622, fig. 1187.

Coal-measures; Ohio.

Eurythorax Cope. Type *E. sublævis* Cope.*Cope, E. D.* 1871 L.

1874 L, p. 275.

1875 D, pp. 357, 401.

Fritsch, A. 1883 A (1879), p. 62.

Miall, L. C. 1875 A, p. 186.

Miller, S. A. 1889 A, p. 622.

Zittel, K. A. 1890 A, p. 378.

Eurythorax sublævis Cope.*Cope, E. D.* 1871 L.

1872 JJ.

1874 L, p. 275.

1875 D, p. 402, pl. xlii, fig. 3.

Coal-measures; Ohio.

THYRSIDIUM Cope. Type *T. fasciculare* Cope.*Cope, E. D.* 1875 D, p. 365.

Miller, S. A. 1889 A, p. 626.

Zittel, K. A. 1890 A, p. 382.

Thyrsideium fasciculare Cope.*Cope, E. D.* 1875 D, p. 365, pl. xlii, fig. 3.

Coal-measures; Ohio.

PLEUROPTYX Cope. Type *P. clavatus* Cope.

- Cope, E. D. 1875 J.
1875 D, pp. 357, 370.
Miller, S. A. 1889 A, p. 624.

Pleuroptyx clavatus Cope.

- Cope, E. D. 1875 J.
1875 D, p. 370, pl. xlii, fig. 1; pl. xlii, fig. 2.
Coal-measures; Ohio.

CERCARIOMORPHUS Cope. Type *C. parvisquamis* Cope.

- Cope, E. D. 1885 D, p. 405.
Subordinal position doubtful.

Cercariomorphus parvisquamis Cope.

- Cope, E. D. 1885 D, p. 405.
Coal-measures; Ohio.

Suborder APÆCOSPONDYLI nom. nov.

- Baur, G. 1886 K. (Embolomeri.)
1888 C, p. 3. (Ganocephala, Rhachitomi, Embolomeri.)
Case, E. C. 1878 B, p. 510 (Rhachitomi); p. 511 (Embolomeri.)
Cope, E. D. 1868 J, pp. 210, 221. (Labyrinthodontia and Ganocephala.)
1875 D, p. 356. (Labyrinthodontia and Ganocephala.)
1880 A, p. 49. (Labyrinthodontia and Ganocephala.)
1880 J. (Ganocephala.)
1880 L, p. 610. (Embolomeri, Ganocephala.)
1882 T. (Rhachitomi.)
1884 P, pp. 26, 36. (Embolomeri, Stegocephali.)
1885 G, p. 243. (Embolomeri.)
1885 W. (Embolomeri.)
1887 S, p. 331. (Rhachitomi, Embolomeri.)
1888 H. (Ganocephala.)
1888 V. (Ganocephala, Embolomeri, Rhachitomi.)
1888 AA. (Embolomeri, Rhachitomi.)
1889 D, p. 13. (Ganocephala, Embolomeri, Rhachitomi.)
1889 R, p. 861. (Ganocephala, Embolomeri, Rhachitomi.)
1891 F, p. 645. (Embolomeri, Rhachitomi, Ganocephali.)
1891 N, p. 28. (Ganocephali, Rhachitomi, Embolomeri.)
1898 B, p. 43. (Ganocephala, Rhachitomi, Embolomeri.)
Credner, H. 1882 A. (Stegocephali.)
1883 A. (Stegocephali.)
Credner, H. 1885 A. (Stegocephali.)

- Credner, H. 1886 A. (Stegocephali.)
1888 A. (Stegocephali.)
1889 A. (Stegocephali.)
1890 A. (Stegocephali.)
Dawson, J. W. 1894 A, p. 265. (Labyrinthodontia.)
Fraas, E. 1889 A, p. 8. (Temnospondyli, Stereospondyli.)
Fritsch, A. 1883 A (1879), p. 33. (Labyrinthodontia.)
Gadow, H. 1898 A, p. 12. (Temnospondyli.)
Hoffman, C. K. 1874 A, p. 47. (Labyrinthodontia.)
Huxley, T. H. 1863 A. (Labyrinthodontia.)
1870 A. (Labyrinthodontia.)
1872 A, p. 150. (Labyrinthodontia.)
1876 B, xiii, p. 412. (Labyrinthodontia.)
Lydekker, R. 1890 A, p. 139. (Labyrinthodontia vera.)
Marsh, O. C. 1877 E. (Labyrinthodontia.)
Meyer, H. 1857 A, p. 208. ("Labyrinthodonten.")
Miall, L. C. 1875 C. (Labyrinthodontes.)
Nicholson and Lydekker 1889 A, p. 102.
Owen, R. 1845 B, pp. 182, 195. ("Labyrinthodonts.")
1860 A, pp. 155, 158, 168. (Ganocephala, Labyrinthodontia.)
1860 E, p. 182. (Ganocephala.)
1866 A, p. 14. (Labyrinthodontia and Ganocephala.)
Steinmann and Döderlein 1890 A, p. 611. (Embolomeri.)
Wiedersheim, R. 1878 A. (Ganocephala, Labyrinthodontia.)
Woodward, A. S. 1898 B, p. 132. (Labyrinthodontia.)
Zittel, K. A. 1890 A, p. 384 (Temnospondyli); p. 397 (Stereospondyli).

DENDRERPETONTIDÆ.

- Fritsch, A. 1889 B (1885), p. 5.
Cope, E. D. 1875 X, p. 10. (Baphetidæ.)
Dawson, J. W. 1895 A, p. 75. (Dendrerpetonidæ.)

- Lydekker, R. 1890 A, p. 170. (Dendrerpetidæ.)
Nicholson and Lydekker 1889 A, p. 1032. (Dendrerpetidæ.)

DENDRERPETON Owen. Type *D. acadianum* Owen.

- Owen, R. 1853 C, p. 66.
Cope, E. D. 1868 J, p. 212.
1869 M, p. 12.
1880 A, p. 50.

- Credner, H. 1888 A, p. 550.
Dawson, J. W. 1860 A, p. 273.
1863 A, pp. 431, 444.
1863 B.

Dawson, J. W. 1863 D, pp. 81, 282.

1868 A, p. 362.

1878 A, p. 362; suppl. p. 60.

1882 A, p. 635.

1891 B, p. 154.

1895 A, p. 76.

Fritsch, A. 1883 A (1879), p. 58.

1889 B, p. 6.

Huxley, T. H. 1863 A, p. 67.

Lydekker, R. 1890 A, p. 170. (Dendrerpetum.)

Maggi, L. 1898 A, fig. 19.

Miall, L. C. 1875 A, p. 550.

Miller, S. A. 1889 A, p. 620.

Nicholson and Lydekker 1889 A, p. 103.

Zittel, K. A. 1890 A, p. 396.

Dendrerpeton acadianum Owen.

Owen, R. 1853 C.

Cope, E. D. 1868 J, p. 214.

1869 M, pp. 9, 13.

Dawson, J. W. 1860 A, p. 273, figs. 10-13.

1862 A.

1863 A, p. 431.

1863 B, p. 470.

1863 C.

1863 D, pp. 81, 159, 282, pls. iii, vi.

1868 A, p. 362, fig. 142.

1876 A, pp. 440, 443, 445.

1878 A, p. 362, figs. 142*a-i*; suppl. p. 60.

1882 A, p. 642, pl. xl, figs. 46-51; pl. xlv, figs.

129, 130, 132-137.

1891 B, p. 145, figs. 1-3.

1894 A, p. 272, figure.

Dawson, J. W. 1894 B, p. 6.

1895 A, p. 76.

Fritsch, A. 1883 A (1879), p. 59.

1889 B (1885), p. 5, fig. 123.

Lesley, J. P. 1889 A, p. 193, figures.

1895 A, pl. dlxxii.

Lydekker, R. 1890 A, p. 223.

Lyell, C. 1853 A, p. 35.

Lyell and Dawson 1853 A, pls. ii, iii.

Marsh, O. C. 1862 B, p. 1.

Miall, L. C. 1875 A, p. 172.

Miller, S. A. 1889 A, p. 620, fig. 1183.

Wyman, J. 1853 C.

Coal-measures; Nova Scotia.

Dendrerpeton oweni Dawson.

Dawson, J. W. 1863 D, pp. 161, 282, pl. iv.

1863 A, p. 431.

1863 B, p. 470.

1863 C, p. 438.

1868 A, p. 368, fig. 143.

1876 A, pp. 443, 444.

1878 A, p. 368, figs. 143*a-g*; suppl. p. 60.

1882 A, p. 643, pl. xlv, figs. 131, 138, 139.

1891 B, p. 149.

1895 A, p. 76.

Fritsch, A. 1883 A (1879), p. 59.

Lesley, J. P. 1889 A, p. 195, figures.

1895 A, pl. dlxxii.

Lydekker, R. 1890 A, p. 223.

Miall, L. C. 1875 A, p. 172.

Coal-measures; Nova Scotia.

BAPHETES Owen. Type *B. planiceps* Owen.

Owen, R. 1854 A, p. 207.

Dawson, J. W. 1863 D, pp. 8, 282.

1868 A, p. 359.

1878 A, p. 328.

1894 A, p. 266.

1895 A, p. 76.

Fritsch, A. 1883 A (1879), p. 61.

1889 B (1885), p. 5.

Huxley, T. H. 1863 A, p. 67.

Miall, L. C. 1875 A, p. 183.

Miller, S. A. 1889 A, p. 618.

Nicholson and Lydekker 1889 A, p. 1033.

Owen, R. 1855 A.

1860 E, p. 184.

Zittel, K. A. 1890 A, p. 398.

The family position of this genus is doubtful.

Baphetes minor Dawson.

Dawson, J. W. 1870 A.

1894 A, p. 268.

Coal-measures; Nova Scotia.

Baphetes planiceps Owe

Owen, R. 1854 A, pl. ix.

Cope, E. D. 1869 M, p. 25.

Dawson, J. W. 1855 A.

1863 A, p. 430.

1863 C.

1863 D, pp. 9, 282, pl. ii.

1868 A, p. 359, fig. 141.

1878 A, pp. 328, 359, figs. 137, 141.

1894 A, p. 266.

1895 A, p. 76.

Fritsch, A. 1889 B (1885), p. 5, fig. 124.

Lesley, J. P. 1889 A, p. 80, figures.

Miller, S. A. 1889 A, p. 619, fig. 1179.

Nicholson and Lydekker 1889 A, p. 1033, fig. 962.

Owen R. 1855 A.

Coal-measures; Nova Scotia.

PLATYSTEGOS Dawson. Type *P. loricatum* Dawson.

Dawson, J. W. 1895 A, p. 76.

Platystegos loricatum Dawson.

Dawson, J. W. 1895 A, p. 76.

Coal-measures; Nova Scotia.

SAUROPLEURIDÆ nom. nov.

- Cope, E. D. 1875 D, p. 357. (Colosteidæ.)
 1875 X, p. 10. (Colosteidæ.)
 Wiedersheim R. 1878 A, p. 42. (Colosteidæ.)
 The name *Sauropleuridæ* is demanded be-

cause the genus *Colosteus*, from which *Colosteidæ* is derived, is regarded as a synonym of *Sauropleura*.

SAUROPLEURA Cope. Type *S. digitata* Cope.

- Cope, E. D. 1868 J, p. 215.
 1869 M, p. 22. (Colosteus, type, *C. foveatus*.)
 1874 L, p. 269.
 1875 D, pp. 373, 402.
 1875 D, p. 405. (Colosteus.)
 1897 C, p. 88.
 Fritsch, A. 1883 A (1879), p. 61 (Colosteus); pp. 65, 127 (Saurpleura).
 Miall, L. C. 1875 A, p. 185 (Colosteus); p. 190 (Saurpleura).
 Miller, S. A. 1889 A, p. 620 (Colosteus); p. 625 (Saurpleura).
 Zittel, K. A. 1890 A, p. 379 (Colosteus); p. 382 (Saurpleura).

Sauropleura digitata Cope.

- Cope, E. D. 1868 J, p. 216.
 1869 M, pp. 16, 242.
 1874 L, p. 270.
 1875 D, p. 403, pl. xxxiv, fig. 1
 1897 C, p. 88.
 Dawson, J. W. 1891 B, p. 153.
 Fritsch, A. 1883 A (1881), p. 128, fig. 70.
 Lesley, J. P. 1890 A, p. 926, figure.
 Coal-measures; Ohio.

Sauropleura foveata (Cope).

- Cope, E. D. 1869 M, p. 24. (Colosteus.)
 1875 D, p. 406, pl. xxxvi, fig. 1.
 Coal-measures; Ohio.

LEPTOPHRACTUS Cope. Type *L. obsoletus* Cope.

- Cope, E. D. 1873 O, p. 340.
 1875 D, p. 399.
 1882 B, p. 461.
 Fritsch, A. 1883 A (1879), p. 62.
 Miall, L. C. 1875 A, p. 187.
 Miller, S. A. 1889 A, p. 623.
 Zittel, K. A. 1890 A, p. 378.

Leptophractus lineolatus Cope.

- Cope, E. D. 1877 A, p. 576.
 Coal-measures; Ohio.

Sauropleura latithorax Cope.

- Cope, E. D. 1897 C, p. 86, pl. iii, fig. 4.
 Coal-measures; Ohio.

Sauropleura newberryi Cope.

- Cope, E. D. 1875 D, p. 404, pl. xxxvii, figs. 2, 3; pl. xli, fig. 5.
 Lesley, J. P. 1890 A, p. 928, figure.
 Coal-measures; Ohio.

Sauropleura pauciradiata Cope.

- Cope, E. D. 1874 L, p. 275. (Colosteus.)
 1875 D, p. 408, pl. xl, figs. 1, 2. (Colosteus.)
 1897 C, p. 86.
 Coal-measures; Ohio.

Sauropleura scutellata (Newb.).

- Newberry J. S. 1856 B, p. 98. (Pygopterus.)
 Cope, E. D. 1869 M, p. 23. (Colosteus crassiscutatus.)
 1871 G, p. 41. (Colosteus.)
 1873 Q, p. 418. (Colosteus.)
 1874 L, p. 275. (Colosteus.)
 1875 D, p. 407, pl. xxix, fig. 3; pl. xxxiii, fig. 1; pl. xxxvi, fig. 2. (Colosteus.)
 1877 A, p. 578. (Colosteus.)
 1897 C, p. 88. (Saurpleura.)
 Woodward, A. S. 1891 A, p. 474. ("Doubtful fossil.")
 Coal-measures; Ohio.

ARCHEGOSAURIDÆ.

References are here given also to the literature of the genus *Archegosaurus*.

- Baur, G. 1886 C. (Archegosaurus.)
 1888 C. (Archegosaurus.)
 1896 C, p. 662. (Archegosaurus.)
 1897 A. (Archegosaurus.)
 Cope, E. D. 1882 T. (Trimerorhachidæ.)
 1884 P, p. 28. (Trimerorhachidæ.)
 1889 R, p. 861. (Trimerorhachidæ, Archegosauridæ.)

- Cope, E. D. 1891 N, p. 29. (Trimerorhachidæ, Archegosauridæ.)
 1898 B, p. 45. (Ganocephali.)
 Credner, H. 1882 A, p. 231. (Archegosaurus.)
 1885 A, p. 718. (Archegosaurus.)
 Emery, C. 1897 A. (Archegosaurus.)
 Fraas, E. 1889 A. (Archegosaurus.)
 Fritsch, A. 1889 B (1885), p. 13. (Archegosauridæ.)
 Gadow, H. 1896 A, p. 21. (Archegosaurus.)
 Gaudry, A. 1883 A, p. 261. (Archegosaurus.)

- Goldfuss, A. 1847 A, p. 3, pls. i-iii. (Archegosaurus.)
 Huxley, T. H. 1863 A, p. 67. (Archegosauria.)
 Jaekel, O. 1896 A, p. 3. (Archegosaurus.)
 1896 B, p. 118. (Archegosaurus.)
 Lydekker, R. 1890 A, p. 177. (Archegosauridæ.)
 Maggi, L. 1898 A, figs. 4-6. (Archegosaurus.)
 Meyer, H. 1851 B, (Archegosaurus.)
 1857 A. (Archegosaurus.)
 1858 A. (Archegosaurus.)
 Miall, L. C. 1875 A, p. 166. (Archegosauria.)

- Miall, L. C. 1875 C. (Archegosaurus.)
 Nicholson and Lydekker 1889 A, p. 1029. (Archegosauridæ.)
 Owen, R. 1860 A, p. 156. (Archegosaurus.)
 Pictet, F. J. 1853 A, p. 551. (Archegosaurus.)
 Quenstedt, F. A. 1852 A, p. 153. (Archegosaurus.)
 1885 A, p. 245. (Archegosaurus.)
 Woodward, A. S. 1898 B, p. 133. (Archegosaurus.)
 Zittel, K. A. 1890 A, p. 384. (Archegosaurus.)
 It is possible that the name *Trimerorhachidæ* has priority over *Archegosauridæ*.

TRIMERORHACHIS Cope. Type *T. insignis* Cope.

Cope, E. D. 1878 B, p. 524.

Baur, G. 1888 C, p. 6.

Cope, E. D. 1878 U.

1878 DD.

1880 A, p. 54.

1884 P, p. 32.

1888 H, p. 298.

1888 U, p. 915.

1888 AA, p. 243.

Gadow, H. 1896 A, p. 21.

Hulke, J. W. 1888 A, p. 423.

Lydekker, R. 1890 A, p. 189.

Miller, S. A. 1889 A, p. 626.

Nicholson and Lydekker 1889 A, p. 1030.

Zittel, K. A. 1890 A, p. 389.

***Trimerorhachis bilobatus* Cope.**

Cope, E. D. 1883 H, p. 629.

1884 P, p. 32.

1888 BB, p. 286.

Permian; Texas.

***Trimerorhachis conangulus* Cope.**

Cope, E. D. 1896 I, p. 137.

Permian; Texas.

***Trimerorhachis insignis* Cope.**

Cope, E. D. 1878 B, p. 524.

1880 A, p. 54.

1881 K, p. 163.

1883 H, p. 630.

1884 P, p. 32, figs. 3, 4.

1888 O, p. 466, pl. vi, fig. 1.

1888 AA, p. 43, fig. 1.

1888 BB, p. 286.

Lydekker, R. 1890 A, p. 190, fig. 46.

Zittel, K. A. 1890 A, p. 389, figs. 379 a-d.

Permian; Texas.

***Trimerorhachis mesops* Cope.**

Cope, E. D. 1896 G, p. 454.

Permian; Texas.

DISSORHOPHUS Cope. Type *D. multicinctus* Cope.

Cope, E. D. 1895 D.

Baur, G. 1896 B, p. 569.

***Dissorhophus articulatus* Cope.**

Cope, E. D. 1896 E, pl. xxi.

Permian; Texas.

***Dissorhophus multicinctus* Cope.**

Cope, E. D. 1895 D.

Permian; Texas.

CRICOTIDÆ.

Cope, E. D. 1884 P, p. 38.

1889 R, p. 861.

1891 N, p. 30.

1898 B, p. 46.

Fritsch, A. 1889 B (1885), p. 11. (Diplovertebridæ.)

Lydekker, R. 1890 A, p. 175. (Diplospondylidæ.)

CRICOTUS Cope. Type *C. heteroclitus* Cope.

Cope, E. D. 1875 T, p. 405.

Baur, G. 1888 C, p. 14.

1896 C, p. 662.

Cope, E. D. 1878 DD.

1880 J.

1880 L, p. 610.

1884 I, p. 29.

1884 P, p. 38.

1885 W.

1886 O.

1886 P.

1888 U, p. 915.

Cope, E. D. 1888 AA.

1888 BB, p. 286.

1888 DD, p. 363.

Gadow, H. 1896 A, p. 23.

Hay, O. P. 1895 A, p. 45.

Lydekker, R. 1890 A, p. 175.

Maggi, L. 1898 A, fig. 20.

Miller, S. A. 1889 A, p. 620.

Williston, S. W. 1897 B, figs. 1-4.

1898 J, p. 120.

Woodward, A. S. 1898 B, p. 136.

Zittel, K. A. 1890 A, p. 394.

Cricotus crassidiscus Cope.

- Cope, E. D.* 1884 I, p. 28.
 1878 B, p. 522. (C. heteroclitus, in part.)
 1884 P, p. 39, text fig. 7, pl. v. (See C. heteroclitus.)
 1888 AA, p. 246, fig. 3.
 1888 BB, p. 286.
Williston, S. W. 1897 B, p. 54.
 1898 J, p. 121.
Zittel, K. A. 1890 A, p. 351, fig. 331; p. 395, fig. 384.
 (C. heteroclitus; not of Cope.)
 Permian; Texas.

Cricotus gibsoni Cope.

- Cope, E. D.* 1877 E, p. 185.
Case, E. C. 1900 A, p. 709, figs. 15a-15c.
Cope, E. D. 1881 K, p. 163.
 1884 P, p. 39.
 1888 BB, p. 286.
 Permian; Illinois.

Cricotus heteroclitus Cope.

- Cope, E. D.* 1875 T, p. 405.

- Case, E. C.* 1900 A, p. 708, pl. i, figs. 12a-12d; 13, 14.
Cope, E. D. 1877 E, p. 186. (C. discophorus.)
 1877 N, p. 63.
 1878 B, p. 523. (C. discophorus.)
 1881 K, p. 163.
 1884 I, p. 29.
 1884 F, p. 39, fig. 7 and pl. v. (See C. crassidiscus.)
 1888 AA, p. 253, pl. i, figs. 7, 8.
 1888 BB, p. 286.
Lydekker, R. 1890 A, p. 176, fig. 42.
 Permian; Illinois.

Cricotus hypantrius Cope.

- Cope, E. D.* 1884 I, pp. 29, 30.
 1888 AA, p. 253, pl. i, figs. 2-6.
 1888 BB, p. 286.
 Permian; Texas.

Cricotus sp. indet.

- Case, E. C.* 1900 A, p. 709, pl. v, figs. 13a-16.
 Permian; Illinois.

ANTHRACOSAURIDÆ.

- Cope, E. D.* 1875 X, p. 10.
Atthey, T. 1876 A, p. 146, pls. viii-xi. (Anthracosaurus.)
Hancock and Atthey 1869 A, p. 313. (Anthracosaurus.)

- Huxley, T. H.* 1863 A. (Anthracosaurus.)
Lydekker, R. 1890 A, p. 157.
Miall, L. C. 1875 A, p. 159. (Anthracosaurus.)
Nicholson and Lydekker 1889 A, p. 1033.
Zittel, K. A. 1890 A, p. 398. (Gastrolepidoti.)

EOSAURUS Marsh. Type *E. acadianus* Marsh.

- Marsh, O. C.* 1862 B.
Agassiz, L. 1862 A.
Cope, E. D. 1869 M, p. 30.
Fritsch, A. 1883 A (1879), p. 61.
Huxley, T. H. 1863 A, p. 62.
Lydekker, R. 1890 A, p. 166.
Marsh, O. C. 1863 A.
Miall, L. C. 1875 A, p. 186.
Miller, S. A. 1889 A, p. 621.
Nicholson and Lydekker 1889 A, p. 1037.
Zittel, K. A. 1890 A, p. 400.

The position of Eosaurus in this family is not at all established.

Eosaurus acadianus Marsh.

- Marsh, O. C.* 1862 B, pls. i, ii.
Cope, E. D. 1869 M, p. 30.
Dawson, J. W. 1863 A, p. 431.
 1863 C, p. 440.
 1863 D, pp. 275, 283.
 1868 A, p. 382, fig. 148.
 1878 A, p. 382, fig. 148.
Huxley, T. H. 1863 A, p. 62.
Lesley, J. P. 1895 A, pl. dlxxii.
Lydekker, R. 1890 A, p. 166.
Marsh, O. C. 1862 A. (No description.)
 1863 A.
Miller, S. A. 1889 A, p. 621, fig. 1184.
 Coal-measures; Nova Scotia.

ERYOPIDÆ.

- Cope, E. D.* 1882 T.
 1882 B, pp. 460, 461.
 1884 P, p. 28.
 1885 W.
 1891 N, p. 29.

- Lydekker, R.* 1890 A, p. 191.
Nicholson and Lydekker 1889 A, p. 1029.

ERYOPS Cope. Type *E. megacephalus* Cope.

- Cope, E. D.* 1877 E, p. 188.
Baur G. 1888 C, p. 13.
Baur and Case 1899 A, p. 3, footnote.
Broili, F. 1899 A, p. 84.

- Cope, E. D.* 1878 B, p. 15 (Epicordylus, type *E. erythroliticus*); p. 520 (Eryops); p. 521 (Pari-oxy, type *P. ferricolus*); p. 526 (Rhachitonus, type *R. valens*).

- Cope, E. D. 1878 U. (Rhachitonus, Parioxys, Epicordylus.)
 1878 AA. (Rhachitonus.)
 1878 DD. (Epicordylus.)
 1879 A, p. 34. (Rhachitonus.)
 1880 A, pp. 49-51. (Eryops, Rhachitonus.)
 1880 J.
 1882 T.
 1884 P, p. 33.
 1886 O.
 1886 P.
 1888 AA.
 1888 DD.
 1894 C, p. 789.
 1896 G, p. 439.

Emery C. 1897 A.

Gadow H. 1896 A, p. 21.

Lydekker R. 1890 A, p. 191.

Miller, S. A. 1889 A, p. 622.

Nicholson and Lydekker 1889 A, pp. 1022, 1032.

Seeley, H. G. 1892 A.

Stickler, L. 1899 A, p. 85.

Williston, S. W. 1899 E, p. 185.

Zittel, K. A. 1890 A, p. 392.

↙ **Eryops erythroliticus** Cope.

- Cope, E. D.* 1878 B, p. 515. (Epicordylus.)
 1878 U. (Epicordylus.)
 1888 AA, p. 253, pl. i, fig. 2.
 1888 BB, p. 286.
 Permian; Texas.

↖ **Eryops ferriculus** Cope.

- Cope, E. D.* 1878 B, p. 521. (Parioxys.)
 1878 U. (Parioxys.)
 1881 K, p. 163. (Parioxys.)
 1884 P, p. 35.
 1888 BB, p. 286.
 Permian; Texas.

ICHTHYCANTHUS Cope.

- Cope, E. D.* 1877 A, p. 573.
 Baur, G. 1888 C, p. 16.
 Cope, E. D. 1885 Z, p. 9.
 Miller, S. A. 1889 A, p. 622.
 Nicholson and Lydekker 1889 A, p. 1032.

ZATRACHYS Cope. Type *Z. serratus* Cope.

- Cope, E. D.* 1878 B, p. 523.
 Broili, F. 1899 A, p. 84. (Zatrachis.)
 Cope, E. D. 1882 B, p. 461.
 1882 T.
 1884 P, p. 36.
 1888 U.
 1895 D.
 Miller, S. A. 1889 A, p. 627.
 Zittel, K. A. 1890 A, p. 390.

↖ **Zatrachys apicalis** Cope.

- Cope, E. D.* 1881 AA, p. 1020.
 1884 P, p. 36.
 1888 BB, p. 286.
 1896 E, p. 937.
 Permian; New Mexico.

Eryops megacephalus Cope.

- Cope, E. D.* 1877 E, p. 188.
 Baur, G. 1897 A, p. 978.
 Broili, F. 1899 A, p. 61, pls. viii-x.
 Cope, E. D. 1878 B, p. 520 (E. megacephalus) p. 526 (Rhachitonus valens).
 1878 U. (Rhachitonus valens.)
 1880 A, p. 51, pls. i-iv.
 1881 K, p. 163.
 1884 P, p. 29, figs. 5, 6 and pl. iii.
 1888 AA, figs. 2, 6.
 1888 BB, p. 286.
 1888 DD, with plate.
 Dana, J. D. 1896 A, p. 686, fig. 1123.
 Emery, C. 1897 A, p. 102, figs. 1, 3.
 Hulke, J. W. 1888 A, p. 423. (Rhachitonus valens.)
 Lydekker, R. 1890 A, p. 191, fig. 47.
 Seeley, H. G. 1892 A, pp. 349, 360.
 Stickler, L. 1899 A, p. 85, pls. xi, xii.
 Williston, S. W. 1899 C, p. 221.
 1899 E, p. 185, pls. xxvii, xxix, xxx.
 Zittel, K. A. 1890 A, p. 393, figs. 382, 383.
 Permian; Texas, Indian Territory.

↘ **Eryops? platypus** Cope.

- Cope, E. D.* 1877 A, p. 574. (Ichthyacanthus.)
 Baur, G. 1888 C, p. 16. (Ichthyacanthus.)
 Cope, E. D. 1885 Z, p. 9. (Ichthyacanthus.)
 1888 BB, p. 289, fig. 1. (Eryops.)
 Coal-measures; Ohio.

Eryops reticulatus Cope.

- Cope, E. D.* 1881 AA, p. 1020.
 1884 P, p. 34.
 1888 BB, p. 286.
 Permian; New Mexico.

Type *I. ohiensis* Cope.

↘ **Ichthyacanthus ohiensis** Cope.

- Cope, E. D.* 1877 A, p. 573.
 1885 Z, p. 9.
 Coal-measures; Ohio.

Zatrachys conchigerus Cope.

- Cope, E. D.* 1896 G, p. 453.
 Permian; Texas.

Zatrachys microphthalmus Cope.

- Cope, E. D.* 1896 G, p. 452.
 Permian; Texas.

↘ **Zatrachys serratus** Cope.

- Cope, E. D.* 1878 B, p. 523.
 1881 K, p. 163.
 1884 P, p. 36.
 1888 O, p. 466, pl. vi, fig. 2.
 1888 BB, pp. 286, 289.
 Permian; Texas.

ANISODEXIS Cope. Type *A. imbricarius* Cope.

Cope, E. D. 1882 B, p. 459.
 Broili, F. 1899 A, p. 84.
 Cope, E. D. 1884 P, p. 36.
 Miller, S. A. 1889 A, p. 618.
 Zittel, K. A. 1890 A, p. 393.

Anisodexis enchodus Cope.

Cope, E. D. 1885 B, p. 406.

Cope, E. D. 1897 C, p. 88.
 Coal-measures; Ohio.

Anisodexis imbricarius Cope.

Cope, E. D. 1882 B, p. 459.
 1884 P, p. 36.
 1888 BB, p. 286.
 Permian; Texas.

ACHELOMA Cope. Type *A. cumminsi* Cope.

Cope, E. D. 1882 B, p. 455.
 Broili, F. 1899 A, p. 84.
 Cope, E. D. 1884 P, p. 35.
 Miller, S. A. 1889 A, p. 617.
 Zittel, K. A. 1890 A, p. 393.

Acheloma cumminsi Cope.

Cope, E. D. 1882 B, p. 456.
 1884 P, p. 35.
 1888 BB, p. 286.
 Permian; Texas.

MASTODONSAURIDÆ.

Huxley, T. H. 1863 A, p. 65. (Mastodonsauria.)
 Lydekker, R. 1890 A, p. 141.
 Miall, L. C. 1875 A, p. 149.

Quenstedt, F. A. 1850 B. ("Mastodonsaurier.")
 1885 A, p. 240. (Mastodonsauri.)
 Zittel, K. A. 1890 A, p. 401. (Labyrinthodonta.)

MASTODONSAURUS Jaeger. Type *Salamandroides giganteus* Jaeger.

Jaeger, G. F. 1828 A, p. 35.
 Cope, E. D. 1898 B, p. 57, pl. i, fig. 1.
 Fraas, E. 1889 A, p. 32.
 Huxley, T. H. 1863 A, p. 65.
 Jackel, O. 1896 A, p. 5.
 Lydekker, R. 1890 A, p. 142.
 Maggi, L. 1898 A, figs. 11, 23.
 Miall, L. C. 1875 A, p. 151.
 Owen, R. 1841 D, p. 5.
 1842 B. (Labyrinthodon.)
 1842 C. (Labyrinthodon.)

Pictet, F. J. 1853 A, p. 547.
 Quenstedt, F. A. 1850 B.
 1852 A, p. 148.
 1885 A, p. 240.
 Woodward, A. S. 1898 B, p. 137.
 Zittel, K. A. 1890 A, p. 404.

Mastodonsaurus sp. indet.

Williston, S. W. 1897 G, pl. xxi.
 Carboniferous; Kansas.

EUPELOR Cope. Type *Mastodonsaurus durus* Cope.

Cope, E. D. 1868 J, p. 221.
 1893 A, p. 12.
 Fritsch, A. 1883 A (1879), p. 62.
 Miall, L. C. 1875 A, p. 186.
 Zittel, K. A. 1890 A, p. 408.

Eupelor durus Cope.

Cope, E. D. 1866 D, p. 250. (Mastodonsaurus.)

Cope, E. D. 1868 J, p. 221.
 1869 M, p. 25.
 1887 A, p. 209.
 Fritsch, A. 1883 A (1879), p. 62.
 Miall, L. C. 1875 A, p. 186.
 Triassic; Pennsylvania.

PARIOSTEGUS Cope. Type *P. myops* Cope.

Cope, E. D. 1868 J, p. 211.
 1869 M, p. 10.
 Fritsch, A. 1883 A (1879), p. 64.
 Miall, L. C. 1875 A, p. 189.
 Zittel, K. A. 1890 A, p. 189.

Pariostegus myops Cope.

Cope, E. D. 1868 J, p. 212.
 1869 M, p. 11.
 1875 V, p. 32.
 Triassic; North Carolina.

DICTYOCEPHALUS Leidy. Type *D. elegans* Leidy.

Leidy, J. 1856 L, p. 256.
 1857 A, p. 272.
 Miall, L. C. 1875 A, p. 185.
 Zittel, K. A. 1890 A, p. 408.

Dictyocephalus elegans Leidy.

Leidy, J. 1856 L, p. 256.
 Cope, E. D. 1868 J, p. 221.
 1869 M, p. 25.

Cope, E. D. 1875 V, p. 32.
 Emmons E. 1856 A, p. 347. (No name.)
 1857 A, p. 59, figs. 31, 32.
 1858 A, p. 78.
 1860 A, p. 184, fig. 162.
 Fritsch, A. 1883 A (1879), p. 61.
 Leidy, J. 1857 A, p. 272.
 Triassic (Chatham); North Carolina.

Caudata
Order URODELA.

Baur, G. 1888 C, pp. 36-62.

Boulenger, G. A. 1882 A.

Cope, E. D. 1866 F, p. 97.

1869 M, p. 5.

1871 B.

1875 D, p. 352.

1888 H, p. 299.

1888 O.

1888 R.

1889 D, p. 29.

1891 N, pp. 28, 31.

1898 B, p. 48.

Emery, C. 1897 B.

Gadow, H. 1889 A, p. 459.

1896 A, p. 2.

1898 A, p. 13.

Gegenbaur, C. 1864 A.

1865 B, p. 66.

1898 A.

Goeppert, E. 1895 B.

1896 A, p. 398.

Haeckel, E. 1895 A, p. 279.

Hasse, C. 1893 A.

Hay, O. P. 1895 A, p. 46.

1896 B, p. 959.

1899 F, p. 682.

Hoffmann, C. K. 1874 A.

1878 A.

Howes, G. B. 1888 A.

Huxley, T. H. 1872 A.

1874 A.

1875 A.

1875 C.

Kehner, F. A. 1876 A.

Mivart, St. G. 1870 A.

Parker, W. K. 1868 A, p. 58.

1879 B, pp. 31, 61.

1881 A, p. 262.

1882 C.

1882 D.

Peters, K. 1895 A.

Pollard, H. B. 1892 A, p. 420.

Riese H. 1892 A.

Stannius, H. 1856 A.

Walter, F. 1887 A.

Wiedersheim, R. 1876 A.

1877 A.

1880 A.

1889 A, p. 432.

Zittel, K. A. 1890 A, p. 412.

Zwick, W. 1897 A.

GENERA INCERTÆ SEDIS.

SCAPHERPETON Cope. Type *S. tectum* Cope.

Cope, E. D. 1876 I, p. 353.

1882 J, p. 979.

1884 O, p. 100.

Zittel, K. A. 1890 A, p. 420.

Scapherpeton excisum Cope.

Cope, E. D. 1876 I, p. 357.

1877 G, p. 574.

Cretaceous (Laramie); Montana.

Scapherpeton favosum Cope.

Cope, E. D. 1876 I, p. 357.

Cope, E. D. 1877 G, p. 574.

Cretaceous (Laramie); Montana.

Scapherpeton laticolle Cope.

Cope, E. D. 1876 I, p. 356.

1877 G, p. 573.

Cretaceous (Laramie); Montana.

Scapherpeton tectum Cope.

Cope, E. D. 1876 I, p. 355.

1877 G, p. 573.

Cretaceous (Laramie); Montana.

HEMITRYPUS Cope. Type *H. jordanianus* Cope.

Cope, E. D. 1876 I, p. 358.

1882 J, p. 979.

1884 O, p. 100.

Zittel, K. A. 1890 A, p. 420.

Hemitrypus jordanianus Cope.

Cope, E. D. 1876 I, p. 358.

1877 G, p. 574.

1882 J, p. 979.

Cretaceous (Laramie); Montana.

Order SALIENTIA Laurenti.

Laurenti, J. N., 1768, Synop. Rept., p. 24.

This group is usually denominated *Anura*, and this term is employed by the following writers unless otherwise indicated. *Salientia* has priority and is unobjectionable.

Born, G. 1890 A, p. 51.

Boulenger, G. A. 1882 B. (Batrachia salientia.)

Cope, E. D. 1866 F.

1868 J, p. 209.

1869 M, p. 6.

1875 D, pp. 352, 354.

1888 H, p. 301. (Salientia.)

1889 D, p. 232. (Salientia.)

1889 R, p. 861. (Salientia.)

Gadow, H. 1889 A, p. 461.

1896 A, p. 15.

1898 A, p. 14.

Gaupp, E. 1895 A.

Gegenbaur, C. 1864 A.

1865 B, p. 52.

1898 A.

Goeppert, E. 1896 A, p. 427.

Haeckel, E. 1895 A, p. 261. (Batrachia.)

Hay, O. P. 1899 F, p. 682.

Hoffmann, C. K. 1874 A. (Ecaudata.)

Howes, G. B. 1888 B.

Huxley, T. H. 1872 A.

1875 C.

Leydig, F. 1876 A.

Meyer, H. 1845 A, p. 18.

Müller, J. 1831 A, p. 209. (Batrachia.)

Nicholson and Lydekker 1889 A, p. 1042. (Ecaudata.)

Parker, W. K. 1868 A, p. 66. (Amphibia anoura.)

1871 A.

1877 A. (Batrachia.)

1879 B, p. 31.

1881 A.

Perrin, A. 1896 A.

Peters, K. 1895 A.

Stannius, H. 1856 A. (Batrachia.)

Wiedersheim, R. 1889 A, p. 435.

Zittel, K. A. 1890 A, p. 421.

Zwick, W. 1897 A.

RANIDÆ.

Boulenger, G. A. 1882 B, p. 3.

Cope, E. D. 1871 B.

1889 D, p. 390.

Hoffmann, C. K. 1874 A.

Meyer, H. 1860 B.

Parker, W. K. 1871 A.

1881 A.

Stannius, H. 1856 A. (Ranina.)

Zittel, K. A. 1890 A, p. 428.

RANA Linn. Type *R. temporaria* Linn.

Linnaeus, C., 1758, Syst. Nat., ed. x, p. 210.

Boulenger, G. A. 1882 B, 6.

Cope, E. D. 1889 D, p. 393.

Hoffmann, C. K. 1874 A.

Parker, W. K. 1881 A.

Zittel, K. A. 1890 A, p. 428.

Rana sp. indet.

Wheatley, C. 1871 B.

Pleistocene; Pennsylvania.

EOBATRACHUS Marsh. Type *E. agilis* Marsh.

Marsh, O. C. 1887 A, p. 328. (No definition.)

Eobatrachus agilis Marsh.

Marsh, O. C. 1887 A, p. 328. (No description.)

1897 C, p. 508. (No description.)

Jurassic; Wyoming.

Class REPTILIA.

Baur, G. 1885 E.

1886 B.

1886 H.

1892 D, p. 211.

1895 A.

1895 D.

1895 E.

1896 A.

Bemmelen, J. F. 1899 A, p. 162.

Boulenger, G. A. 1885 A. (Lacertilia.)

1887 A. (Lacertilia.)

1889 A. (Testudinata, Crocodilia.)

1893 A. (Ophidia.)

1894 A. (Ophidia.)

1896 C. (Ophidia.)

Burckhardt, R. 1895 A.

Calori L. 1894 A.

Case, E. C. 1898 A.

Cope, E. D. 1864 A.

1869 M, pp. 3, 26.

1871 B.

1885 G.

1887 S, p. 333

1888 AA.

Cope, E. D. 1889 R, p. 863.

1891 N, p. 35.

1892 N.

1892 R.

1898 B, p. 52.

1900 A, p. 159.

Credner, H. 1888 A.

Cuvier, G. 1834 A, ix, pp. 1-24.

Fürbringer, M. 1885 B.

Gadow, H. 1896 A, p. 23.

1898 A, p. 17.

Gaupp, E. 1891 A.

1895 B.

1900 A.

Gegenbaur, C. 1864 A.

1865 B, p. 24.

1898 A.

Günther, A. 1886 A.

Haeckel, E. 1895 A, p. 291.

Hallmann, E. 1837 A, pp. 16, 29.

Hoffmann, C. K. 1876 A.

1878 A.

Humphrey, G. M. 1866 A.

- Huxley, T. H. 1867 A, p. 415.
 1868 A.
 1870 A.
 1872 A, p. 167.
 1876 B, xiii pp. 429, 514.
- Kehner, F. A. 1876 A.
 Kehrer, G. 1886 A, p. 73.
 Kingsley and Ruddick 1900 A, p. 219.
 Köstlin, O. 1844 A.
 Leidy, J. 1865 A.
 Levy, H. 1898 A.
 Lydekker, R. 1888 B.
 1889 F.
 1889 G.
 1890 A.
- Männer, H. 1899 A, p. 43.
 Marsh, O. C. 1877 E.
 Meyer, H. 1845 A.
 1855 A.
 1856 B.
 1860 D.
- Mivart, St. G. 1886 A.
 Nicholson and Lydekker 1899 A, p. 1047.
- Osborn, H. F. 1899 I, p. 156.
 1900 J, p. 943.
- Owen, R. 1840 A.
 1842 A.
 1845 B, p. 179.
 1847 B, p. 233.
 1860 A.
- Parker, W. K. 1868 A, p. 90.
 1880 A.
- Pictet, F. J. 1853 A, p. 422
 Röse, C. 1895 A.
 Seeley, H. G. 1888 H.
 1898 A, p. 357.
- Segond, L. A. 1873 A, pp. 1, 24.
 Sixta, V. 1890 A.
 Stannius, H. 1856 A. (Amphibia monoproa.)
 Walter, F. 1887 A.
 Wiedersheim, R. 1889 A, p. 437.
 Woodward, H. 1874 A.
 1874 B.
 1898 B, p. 140.
- Zittel, K. A. 1890 A, pp. 437, 801.

Order COTYLOSAURIA Cope.

- Cope, E. D. 1880 H.
 Baur, G. 1885 J. (<Theromorpha.)
 1887 A. (<Theromorpha.)
 1887 C, p. 102. (<Theromorpha.)
 1891 C, p. 354. (<Theromora.)
 1896 B, p. 569.
- Baur and Case 1897 A. (<Pareiasauria.)
 Burckhardt, R. 1895 A. (<Theromorpha.)
 Case, E. C. 1898 A, pp. 70, 73. (<Pareiasauria.)
 1898 B, p. 517.
 1899 A, p. 244.
- Cope, E. D. 1878 CC. (<Theromorpha.)
 1880 A. (<Theromorpha.)
 1882 B, p. 448.
 1885 A. (<Theromorpha.)
 1885 G, p. 246. (<Theromorpha.)
 1887 S, p. 333. (<Theromorpha.)
 1889 R, p. 866. (<Theromora.)
 1891 F, p. 645.
 1891 N, p. 38.
 1891 Z, p. 13.
 1894 C.
 1896 C.
 1896 D.
 1896 G.
- Cope, E. D. 1896 I.
 1898 B, pp. 54, 60.
 1900 A, p. 159. (Cotylosauria, Theromora.)
- Fürbringer, M. 1900 A, pp. 338, 534, 552, 639, 674.
 (Theromorpha.)
- Günther, A. 1886 A, p. 442. (<Anomodontia.)
 Haeckel, E. 1895 A, p. 306. (<Theromora.)
 Hay, O. P. 1899 F, p. 682.
- Kükenthal, W. 1892 A. (<Theromorpha.)
 Lydekker, R. 1890 A, p. 112. (<Anomodontia, Pariasauria.)
- Osborn, H. F. 1898 B. (<Theromora.)
 1899 B, p. 95.
- Seeley, H. G. 1889 A, p. 288. (<Pareiasauria.)
 1892 A. (<Pareiasauria.)
 1895 A, p. 998. (Pareiasauria.)
- Steinmann and Döderlein 1890 A, p. 622.
 (<Theromorpha.)
- Woodward, A. S. 1898 B, p. 145. (Pariasauria, part.)
- Zittel, K. A. 1890 A, p. 553 (<Theromorpha);
 p. 570 (Pareiasauria).
 The *Pareiasauria* are a related but probably distinct group.

DIADECTIDÆ.

- Cope, E. D. 1880 A, p. 45.
 Baur and Case 1899 A.
 Cope, E. D. 1880 H.
 1882 B, p. 448.
 1883 K, p. 108.
 1886 A.
 1888 U.
 1888 BB, p. 288.
- Cope, E. D. 1896 G, pp. 439, 441.
 1896 I, p. 130.
 1898 B, p. 60.
- Lydekker, R. 1890 A, p. 100.
 Marsh, O. C. 1878 C, p. 410. (Nothodontidæ.¹)
 Nicholson and Lydekker 1889 A, p. 1061.
 Zittel, K. A. 1890 A, p. 581.

¹ This family is assigned to the *Diadectidæ* on the authority of Drs. Baur and Case, as above cited.

DIADECTES Cope. Type *D. sideropelicus* Cope.*Cope, E. D.* 1878 B, p. 505.

1878 U.

1880 A, p. 45.

1880 H.

1888 U, p. 916, pl. xvi.

1896 G, p. 441.

1896 I, pp. 131, 133.

Miller, S. A. 1889 A, p. 620.

Zittel, K. A. 1890 A, p. 582.

Diadectes biculminatus Cope.*Cope, E. D.* 1896 I, p. 132, text fig. 3.1878 B, p. 505. ("No. 2" of *D. sideropelicus*.)

Permian; Texas.

Diadectes latibuccatus Cope.*Cope, E. D.* 1878 B, p. 505.

1880 H.

1881 K, p. 163. (*Empedocles*.)1883 H, p. 634. (*Empedias*.)1888 BB, p. 288. (*Empedias*.)1896 G, p. 442. (*Empedias*.)*Cope, E. D.* 1896 I, p. 131.

Permian; Texas.

Diadectes phaseolinus Cope.*Cope, E. D.* 1880 A, p. 46.

1881 K, p. 163.

1883 H, p. 634. (*Empedias*.)

1886 A.

1888 U, p. 916, pl. xvi, fig. 3.

1888 BB, p. 288. (*Empedias*.)1896 G, p. 442. (*Empedias*.)

1896 I, p. 132, text fig. 2.

Permian; Texas.

Diadectes sideropelicus Cope.*Cope, E. D.* 1878 B, p. 505.

1878 U.

1881 K, p. 164.

1888 BB, p. 288.

1896 I, p. 133.

Lydekker, R. 1890 A, p. 104.

Permian; Texas.

EMPEDIAS Cope. Type *E. alatus* Cope.*Cope, E. D.* 1883 H, p. 634. (To replace *Empedocles*, preoccupied.)

Baur, G. 1897 B, p. 150.

Cope, E. D. 1878 B, pp. 516, 529. (*Empedocles*.)

1878 U.

1880 A, p. 46. (*Empedocles*.)1880 H. (*Empedocles*.)

1896 G, p. 441.

1896 I, p. 131.

Lydekker, R. 1890 A, p. 101.

Miller, S. A. 1889 A, p. 621.

Seeley, H. G. 1888 H, p. 137.

1889 A, p. 284.

1895 A, p. 1009.

Steinmann and Döderlein 1890 A, p. 623. (*Empedocles*.)

Zittel, K. A. 1890 A, p. 581.

Empedias alatus Cope.*Cope, E. D.* 1878 B, p. 517. (*Empedocles*.)1878 U. (*Empedocles*.)1881 K, p. 164. (*Empedocles*.)

1888 BB, p. 288.

Permian; Texas.

This species is not included by Professor Cope in either the list contained in Cope 1896 G, or in that of Cope 1896 I.

Empedias fissus Cope.*Cope, E. D.* 1883 H, p. 634.

1888 BB, p. 288.

1896 G, p. 442.

1896 I, p. 132, text fig. 4.

Permian; Texas.

Empedias molaris Cope.*Cope, E. D.* 1878 Z. (*Diadectes*.)1880 A, p. 47. (*Empedocles*.)1880 H. (*Empedocles*.)1881 K, p. 164. (*Empedocles*.)

1883 H, p. 634.

1886 A. (*Empedias*.)

1888 BB, p. 288.

1891 N, p. 38, fig. 17.

1896 G, p. 442.

1896 I, p. 131.

Kükenthal, W. 1892 A.

Lydekker, R. 1890 A, p. 102, figs. 20-22.

Seeley, H. G. 1888 H, p. 138, fig. 5.

Wortman, J. L. 1896 A, p. 383.

Zittel, K. A. 1890 A, p. 581, fig. 524.

Permian; Texas.

BOLBODON Cope. Type *B. tenuitectus* Cope.*Cope, E. D.* 1896 I, p. 134.**Bolbodon tenuitectus** Cope.*Cope, E. D.* 1896 I, p. 134, text fig. 1.

Permian; Texas.

CHILONYX Cope. Type *Bolosaurus rapidens* Cope.*Cope, E. D.* 1883 H, p. 631.

Baur, G. 1897 B, p. 150.

Cope, E. D. 1883 P.*Cope, E. D.* 1892 Z, p. 13.

1896 G, p. 441.

1896 I, p. 131.

Cope, E. D. 1898 B, p. 57, pl. i, fig. 2.
 Lydekker, R. 1890 A, pp. 67, 95, 111.
 Miller, S. A. 1889 A, p. 619.
 Seeley, H. G. 1895 A, p. 1009.
 Zittel, K. A. 1890 A, p. 582.

Chilonyx rapidens Cope.

Cope, E. D. 1878 B, p. 507. (Bolosaurus.)

Cope, E. D. 1883 H, p. 631.
 1883 P.
 1888 BB, p. 288.
 1892 Z, p. 25, pl. i, fig. 2.
 1894 B, pl. x, fig. 2.
 1896 G, p. 442, pl. viii, fig. 6.
 1896 I, p. 131.
 Permian; Texas.

NOTHODON Marsh. Type *N. lentus* Marsh.

Marsh, O. C. 1878 C, p. 410.
Baur and Case 1899 A, p. 238.
Credner, H. 1888 A, p. 555.
Zittel, K. A. 1890 A, p. 574.

Nothodon lentus Marsh.

Marsh, O. C. 1878 C, p. 410.
Baur and Case 1899 A, p. 4.
 Permian; New Mexico.

PARIOTICHIDÆ.

Cope, E. D. 1883 H, p. 631.
Case, E. C. 1899 A, p. 238.
Cope, E. D. 1888 BB, p. 287.
 1896 G, pp. 439, 442.

Lydekker, R. 1890 A, p. 112.
Nicholson and Lydekker 1889 A, p. 1056.
Zittel, K. A. 1890 A, p. 580.

PARIOTICHUS Cope. Type *P. brachyops* Cope.

Cope, E. D. 1878 B, pp. 508, 529.
Baur, G. 1897 B, p. 150.
Case, E. C. 1899 A, p. 231.
Cope, E. D. 1878 B, pp. 508, 529. (Ectocynodon,
 type *E. ordinatus* Cope.)
 1879 A, p. 34
 1882 B, p. 450. (Ectocynodon.)
 1883 H, p. 631. (Pariotichus, Ectocynodon.)
 1892 Z, p. 14.
 1896 C.
 1896 G, p. 443.
 1898 B, p. 57, fig. 3.
Miller, S. A. 1889 A, p. 621 (Ectocynodon); p. 624
 (Pariotichus).
Nicholson and Lydekker 1889 A, p. 1056. (Parioti-
 chus, Ectocynodon.)
Seeley, H. G. 1895 A, p. 998.
Zittel, K. A. 1890 A, p. 581. (Pariotichus, Ecto-
 cynodon.)

Cope, E. D. 1896 G, pp. 444, 445, pl. vii.
 Permian; Texas.

Pariotichus brachyops Cope.

Cope, E. D. 1878 B, p. 508.
 1881 K, p. 163.
 1888 BB, p. 287.
 1896 G, p. 445.
 Permian; Texas.

Pariotichus incisivus Cope.

Cope, E. D. 1888 BB, p. 290. (Ectocynodon.)
Case, E. C. 1899 A, p. 231, figs. 1-7.
 1900 A, p. 720.
Cope, E. D. 1896 G, p. 445.
 Permian; Texas.

Pariotichus isolomus Cope.

Cope, E. D. 1896 G, pp. 445, 446.
 Permian; Texas.

Pariotichus ordinatus Cope.

Cope, E. D. 1878 B, p. 508. (Ectocynodon.)
 1881 K, p. 163. (Ectocynodon.)
 1888 BB, p. 287. (Ectocynodon.)
 1896 G, pp. 446, 447.
 Permian; Texas.

Pariotichus aduncus Cope.

Cope, E. D. 1896 I, p. 135.
 Permian; Texas.

Pariotichus aguti Cope.

Cope, E. D. 1882 B, p. 451. (Ectocynodon.)
 1888 BB, p. 287. (Ectocynodon.)
 1896 C, pl. vii, a.

ISODECTES Cope. Type *Pariotichus megalops* Cope.

Cope, E. D. 1896 G, p. 442.
 To this genus Cope has also referred *Tudit-
 tanus punctulatus*, which, however, has here
 been retained under *Tuditatus*.

Isodectes megalops Cope.

Cope, E. D. 1883 H, p. 630. (Pariotichus.)

Cope, E. D. 1888 BB, p. 287. (Pariotichus.)
 1892 Z, p. 25, pl. i, fig. 3. (Pariotichus.)
 1894 B, pl. x, fig. 3. (Pariotichus.)
 1896 G, p. 442.
 Permian; Texas.

CAPTORHINUS Cope. Type *C. angusticeps* Cope.Cope, *E. D.* 1896 G, p. 443.**Captorhinus angusticeps** Cope.Cope, *E. D.* 1896 G, p. 443.
Permian; Texas.PANTYLUS Cope. Type *P. cordatus* Cope.Cope, *E. D.* 1881 A, p. 79.

Baur, G. 1897 B, p. 150.

Cope, *E. D.* 1882 HH.

1883 H, p. 631.

1892 Z, p. 14.

1896 G, pp. 442, 449.

1898 B, p. 57, fig. 4.

Miller, S. A. 1889 A, p. 624.

Seeley, H. G. 1895 A, p. 998.

Zittel, K. A. 1890 A, p. 581.

Pantylus coicodius Cope.Cope, *E. D.* 1896 G, p. 450.
Permian; Texas.**Pantylus cordatus** Cope.Cope, *E. D.* 1881 A, p. 79.

1881 K, p. 163.

1888 BB, p. 287.

1892 Z, p. 25, pl. i, fig. 4.

1894 B, pl. x, fig. 4.

1896 G, p. 449.

Permian; Texas.

HYPOPNOUS Cope. Type *H. squaliceps* Cope.Cope, *E. D.* 1896 G, p. 450.**Hypopnous squaliceps** Cope.Cope, *E. D.* 1896 G, p. 451, pl. viii, figs. 3-5.
Permian; Texas.HELODECTES Cope. Type *H. paridens* Cope.Cope, *E. D.* 1880 A, pp. 45, 48.

1896 G, p. 442.

Miller, S. A. 1889 A, p. 622.

Zittel, K. A. 1890 A, p. 582.

Helodectes isaaci Cope.Cope, *E. D.* 1880 A, p. 49.

1881 K, p. 164.

Cope, *E. D.* 1888 BB, p. 288.

Permian; Texas.

Helodectes paridens Cope.Cope, *E. D.* 1880 A, p. 48.

1881 K, p. 164.

1888 BB, p. 288.

Permian; Texas.

PAREIASAURIDÆ.

Cope, *E. D.* 1896 G, pp. 437, 439.

1896 I, p. 137.

Haeckel, E. 1895 A, p. 308. (Pareosaurida.)

Lydekker, R. 1890 A, p. 112.

Seeley, H. G. 1888 D. (Pareiasaurus.)

1889 A. (Pareiasaurus.)

1892 A. (Pareiasaurus.)

LABIDOSAURUS Cope. Type *Pariotichus hamatus* Cope.Cope, *E. D.* 1896 I, p. 136.

Baur G. 1897 B, p. 150.

Labidosaurus hamatus Cope.Cope, *E. D.* 1896 G, p. 448, pl. viii, figs. 1, 2. (Pariotichus.)

1896 I, p. 136.

Permian; Texas.

Order CHELYDOSAURIA Cope.

Cope, *E. D.* 1898 B, pp. 54, 61.

| Hay, O. P. 1899 F, p. 682.

OTOCÆLIDÆ.

Cope, *E. D.* 1896 D.

Baur, G. 1896 B, p. 569.

| Cope, *E. D.* 1896 I, p. 123.

OTOCÆLUS Cope. Type *O. testudineus* Cope.

Cope, E. D. 1896 D.

Baur, G. 1896 B, p. 569.

1897 B, p. 150.

Cope, E. D. 1896 I, p. 123.

1897 A, p. 315.

Woodward, A. S. 1898 B, p. 149.

Otocœlus mimeticus Cope.

Cope, E. D. 1896 I, p. 128, pl. ix, fig. 1.

Cope, E. D. 1896 E, pl. xxii, fig. 11. (No description; called on plate *O. testudineus*.)
Permian; Texas.**Otocœlus testudineus** Cope.

Cope, E. D. 1896 D.

1896 E, pl. xxi, fig. 2.

1896 I, p. 124, pls. vii, viii; pl. ix, fig. 2.

Permian; Texas.

CONODECTES Cope. Type *C. favosus* Cope.

Cope, E. D. 1896 D.

Baur, G. 1896 B, p. 569.

Cope, E. D. 1896 I, pp. 124, 129.

Conodectes favosus Cope.

Cope, E. D. 1896 D.

1896 I, p. 129.

Permian; Texas.

Order ANOMODONTIA Owen.

Owen, R. 1860 A, p. 255.

Cope, E. D. 1878 CC, p. 829.

1880 A, p. 38.

1889 R, p. 865.

Fürbringer, M. 1900 A.

Gadow, H. 1898 A, p. 18.

Haeckel, E. 1895 A, p. 314.

Hay, O. P. 1899 F, p. 682.

Lydekker, R. 1890 A, p. 10.

Osborn, H. F. 1898 O, p. 358.

1900 J, p. 945.

Owen, R. 1881 C, p. 266.

Quenstedt, F. A. 1885 A, p. 218.

Seeley, H. G. 1888 D, p. 101.

1888 F.

1889 A.

1898 A, p. 367.

1900 A, p. 620.

Woodward, A. S. 1898 B, p. 144, in part; p. 157
(Dicynodontia.)

Zittel, K. A. 1890 A, p. 556.

DICYNODONTIDÆ.

Cope, E. D. 1889 R, p. 865.

Huxley, T. H. 1859 C. ("Dicynodonts.")

Lydekker, R. 1890 A, p. 16.

Osborn, H. F. 1898 B. (Dicynodontia.)

DICYNODON Owen. Type *D. lacerticeps* Owen.

Owen, R., 1845, Quart. Jour. Geol. Soc., i, p. 318.

Hulke, J. W. 1892 A, p. 244, figs. 6, 7.

Huxley, T. H. 1859 C.

Lydekker, R. 1890 A, p. 16.

Osborn, H. F. 1898 R, p. 316.

Owen, R. 1845 D.

1856 D.

1856 E.

1860 F.

1863 A.

Quenstedt, F. A. 1885 A, p. 218.

Zittel, K. A. 1890 A, p. 564.

Dicynodon rosmarus Cope.

Cope, E. D. 1869 M, p. 232.

1870 I, p. 445.

An unsatisfactorily described species; its generic identity doubtful.

Triassic; Pennsylvania.

Order PELYCOSAURIA Cope.

Cope, E. D. 1878 B, p. 528.

Baur, G. 1885 E, p. 637.

1886 M, p. 302.

1887 A, p. 488.

1887 C, p. 102. (As part of Theromorpha.)

1897 A, p. 977.

Baur and Case 1897 A.

1899 A.

Case, E. C. 1898 A, pp. 70, 73.

Cope, E. D. 1878 CC. (As part of Theromorpha.)

1880 A. (As part of Theromorpha.)

1880 J.

Cope, E. D. 1882 B, p. 448.

1884 I, pp. 38, 43.

1885 A.

1885 G. (Theromorpha, part.)

1885 V.

1886 O.

1888 U, p. 915.

1888 AA, p. 244.

1889 R, p. 866. (As part of Theromora.)

1891 F, p. 645. (Theriodontia.)

1891 N, p. 38. (Theriodontia.)

1892 R.

- Cope, E. D. 1894 C.
 1897 A, p. 316.
 1898 B, pp. 55, 67.
 Fürbringer, M. 1888 A.
 1900 A.
 Gadow, H. 1898 A, p. 18. (Theriodontia.)
 Haeckel, E. 1895 A, p. 308.
 Hay, O. P. 1899 F, p. 68.
 Lydekker, R. 1890 A, p. 66. (Theriodontia.)
 Marsh, O. C. 1898 B, p. 407. (Theriodontia.)
 Nicholson and Lydekker 1889 A, p. 1057. (Theriodontia.)
 Osborn, H. F. 1898 A, p. 147. (Theriodontia.)
 1898 B, p. 177.
 1898 R, p. 315. (Theriodontia.)
 1899 B, p. 95. (Theriodontia.)
 Owen, R. 1876 B. (Theriodontia.)
 1881 B. (Theriodontia.)
 1881 C. (Theriodontia.)
 Seeley, H. G. 1889 A, p. 282.
 1895 A, p. 1007.
 Steinmann and Döderlein 1890 A, p. 622.
 Woodward, A. S. 1898 B, p. 186.
 Zittel, K. A. 1890 A, pp. 554, 572.

CLEPSYDROPIDÆ.

- Cope, E. D. 1884 I, p. 38.
 Baur and Case, 1899 A.
 Cope, E. D. 1882 B, p. 450. (Edaphosauridæ.)
 1883 H, p. 631. (Edaphosauridæ.)
 1885 A, p. 477.
 1888 BB, p. 287.
 1898 B, p. 67.
 Fürbringer, M. 1900 A.
 Lydekker, R. 1890 A, p. 104.
 Marsh, O. C. 1878 C, p. 410. (Sphenacodontidæ.)
 Nicholson and Lydekker 1889 A, p. 1059.
 Zittel, K. A. 1890 A, p. 574. (Cynodontia.)
 The family *Sphenacodontidæ* proposed by Professor Marsh, is assigned to the *Clepsydropidæ* on the authority of Drs. Baur and Case, as cited above.

CLEPSYDROPS Cope. Type *C. collettii* Cope.

- Cope, E. D. 1875 T, p. 407.
 Baur and Case 1897 A.
 1899 A.
 Case, E. C. 1900 A, p. 711.
 Cope, E. D. 1878 B, pp. 510, 529.
 1878 J.
 1878 U.
 1878 DD.
 1879 A, p. 34.
 1881 K, p. 163.
 1885 A.
 1886 O.
 1888 O.
 1888 AA.
 1892 Z, p. 11 (Diopous, type *C. leptoccephalus*);
 p. 14 (Clepsydrops).
 Kingsley and Ruddick 1900 A, p. 229.
 Lydekker, R. 1890 A, p. 105.
 Miller, S. A. 1889 A, p. 619.
 Nicholson and Lydekker 1889 A, p. 1059.
 Seeley, H. G. 1889 A, pp. 284, 288.
 1895 A, p. 998.
 1895 B, pp. 111, 119.
 Zittel, K. A. 1890 A, p. 574.
 Baur and Case 1897 A, p. 116.
 1899 A, p. 13.
 Case, E. C. 1900 A, p. 720.
 Cope, E. D. 1884 EE, pl. xxxviii, figs. 1, 2.
 1884 GG, p. 1253.
 1885 A, figs. 1, 2.
 1885 V.
 1888 BB, p. 287.
 1892 Z, p. 11, pl. ii, figs. 6, 8. (Diopous.)
 1897 A, p. 318. (Diopous.)
 Zittel, K. A. 1890 A, p. 574.
 Permian; Texas.

Clepsydrops limbatus Cope.

- Cope, E. D. 1877 F, p. 196.
 Baur and Case 1899 A, p. 3.
 Cope, E. D. 1878 B, p. 515. (Embolophorus?)
 1880 Q.
 Permian; Texas.

Clepsydrops macrospondylus Cope.

- Cope, E. D. 1884 I, p. 35.
 Baur and Case 1899 A, p. 14.
 Cope, E. D. 1888 BB, p. 287.
 Permian; Texas.

Clepsydrops natalis Cope.

- Cope, E. D. 1878 B, pp. 509, 529.
 Case, E. C. 1900 A, p. 717.
 Cope, E. D. 1881 K, p. 163.
 1884 I, pp. 38, 42.
 1884 EE, pl. xxxviii, fig. 6.
 1884 HH, p. 1255.
 1885 A, fig. 6.
 1888 BB, p. 287.
 1892 Z.

- Seeley, H. G. 1889 A, p. 290.
 Zittel, K. A. 1890 A, p. 574.
 Permian; Texas.

Clepsydrops collettii Cope.

- Cope, E. D. 1875 T, p. 407.
 Baur and Case 1899 A, p. 1.
 Case, E. C. 1900 A, pp. 711, 720, pl. ii, figs. 1a-3b;
 pl. iv, figs. 7a-7d.
 Cope, E. D. 1877 F, p. 196.
 1877 N, p. 61.
 1881 K, p. 163.
 1884 I, p. 38.
 1888 BB, p. 287.
 Williston, S. W. 1898 J, p. 121.
 Permian; Illinois, Kansas?.

Clepsydrops leptoccephalus Cope.

- Cope, E. D. 1884 I, p. 30, pl. 1, figs. 1-5.

Clepsydropus pedunculatus Cope.

- Cope, E. D.* 1877 N, p. 62.
 Baur and Case 1899 A, p. 2.
 Case, E. C. 1900 A, p. 713, pl. ii, figs. 4a-5d.
Cope, E. D. 1881 K, p. 163.
 1888 BB, p. 287.
 Permian; Illinois.

Clepsydropus vinslovii Cope.

- Cope, E. D.* 1877 N, p. 61.
 Baur and Case 1899 A, p. 2.
 Case, E. C. 1900 A, p. 714, pl. ii, figs. 7a-7d.
Cope, E. D. 1881 K, p. 163.
 1888 BB, p. 287.
 Permian; Illinois.

DIMETRODON Cope. Type *D. incisivus* Cope.

- Cope, E. D.* 1878 B, pp. 512, 529.
 Ameghino, F. 1896 A, p. 487.
 Baur and Case 1897 A.
 1899 A.
 Case, E. C. 1897 A.
 1899 A.
Cope, E. D. 1880 A, p. 42, pl. vi.
 1881 K, p. 163.
 1886 J.
 1888 AA, p. 244.
 1888 BB, p. 292.
 1888 DD, p. 363.
 1889 C, p. 226.
 1897 A, p. 315.
 Miller, S. A. 1889 A, p. 620.
 Nicholson and Lydekker 1889 A, p. 1059.
 Osborn, H. F. 1888 G, p. 222, fig. 8.
 Seeley, H. G. 1889 A, p. 283.
 1895 A, p. 1007.
 1895 B, p. 110.
 Steinmann and Döderlein 1890 A, p. 624.
 Wortman, J. L. 1886 A, p. 383.
 Zittel, K. A. 1890 A, p. 576.

Dimetrodon gigas Cope.

- Cope, E. D.* 1878 U. (Clepsydropus.)
 Baur and Case 1899 A, p. 12.
Cope E. D. 1878 B, p. 515.
 1881 K, p. 163.

- Cope, E. D.* 1888 BB, p. 287.
 Permian; Texas.

Dimetrodon incisivus Cope.

- Cope, E. D.* 1878 U. (Clepsydropus.)
 Baur and Case 1897 A, figures.
 1899 A, p. 12, pls. i-iii.
 Case, E. C. 1897 A, figs. 1-4.
Cope, E. D. 1878 B, p. 512.
 1881 A, p. 81.
 1881 K, p. 163.
 1886 J.
 1888 BB, pp. 287, 292.
 Seeley, H. G. 1889 A, p. 283.
 Zittel, K. A. 1890 A, p. 576, fig. 519.
 Permian; Texas.

Dimetrodon rectiformis Cope.

- Cope, E. D.* 1878 B, p. 514.
 1881 K, p. 163.
 1888 BB, p. 287.
 Permian; Texas.

Dimetrodon semiradicatus Cope.

- Cope, E. D.* 1881 A, p. 80.
 1881 K, p. 163. (*D. biradicatus*.)
 1888 BB, p. 287.
 Permian; Texas.

NAOSAURUS Cope. Type *N. claviger* Cope.

- Cope, E. D.* 1886 J.
 Baur and Case 1899 A.
Cope, E. D. 1892 Z, p. 14.
 1897 A, p. 316.
 Fritsch, A. 1895 B, p. 2.
 Lydekker, R. 1890 A, p. 106.
 Seeley, H. G. 1889 A, p. 283.
 1895 A, p. 998.
 Zittel, K. A. 1890 A, p. 576.

Naosaurus claviger Cope.

- Cope, E. D.* 1886 J.
 1888 BB, pp. 287, 293, pl. ii, figs. 1, 2; pl. iii, figs. 1-3.
 1892 Z, pl. ii, fig. 7.
 Lydekker, R. 1890 A, p. 107.
 Osborn, H. F. 1898 N, pp. 842, 844, fig. 4.
 1898 Q, p. 7, pl. i, fig. 3.

- Zittel, K. A. 1890 A, p. 576, fig. 520.
 Permian; Texas.

Naosaurus cruciger Cope.

- Cope, E. D.* 1878 CC. (Dimetrodon.)
 Baur and Case 1899 A, p. 11.
Cope, E. D. 1880 A, p. 44. (Dimetrodon.)
 1881 A, p. 82. (Dimetrodon.)
 1881 K, p. 163. (Dimetrodon.)
 1886 J.
 1888 BB, pp. 287, 294, pl. iii, fig. 3.
 Lydekker, R. 1890 A, p. 107.
 Permian; Texas.

Naosaurus microdus Cope.

- Cope, E. D.* 1884 I, p. 37. (Edaphosaurus.)
 1886 J.
 1888 BB, pp. 287, 294, pl. ii, fig. 3.
 Permian; Texas.

EDAPHOSAURUS Cope. Type *E. pogonias* Cope.

Cope, E. D. 1882 B, p. 448.
 1884 I, p. 37.
 1886 A.
 1892 Z, p. 15.
Miller, S. A. 1889 A, p. 621.
Seeley, H. G. 1889 A, p. 284.
 1895 A, p. 998.

Zittel, K. A. 1890 A, p. 577.

Edaphosaurus pogonias Cope.

Cope, E. D. 1882 B, p. 449.
 1888 BB, p. 287.
 1892 Z, pl. ii, fig. 5.
 Permian; Texas.

EMBOLOPHORUS Cope. Type *E. fritillus* Cope.

Cope, E. D. 1878 B, pp. 518, 529.
 1884 I, p. 43.
 1885 A, p. 474, figs. 4, 5.
Lydekker, R. 1890 A, p. 108.
Miller, S. A. 1889 A, p. 621.
Seeley, H. G. 1889 A, p. 284.
 1895 B, p. 111.
Zittel, K. A. 1890 A, p. 577.

Cope, E. D. 1884 I, p. 43, pl. 1, figs. 4, 5. ("Embolophorus.")
Lydekker, R. 1890 A, p. 109. (*E. dolloverianus*).
 Permian; Texas.

Embolophorus fritillus Cope.

Cope, E. D. 1878 B, p. 518.
 1881 K, p. 164.
 1884 BB.
Hulke, J. W. 1888 A, p. 423.
Lydekker, R. 1890 A, p. 109.
 Permian; Texas.

Embolophorus dolloverianus Cope.

Cope, E. D. 1888 BB, p. 287.

ARCHÆOBELUS Cope. Type *A. vellicatus* Cope.

Cope, E. D. 1877 E, p. 192.
Case, E. C. 1900 A, p. 715.
Miller, S. A. 1889 A, p. 618.
Zittel, K. A. 1890 A, p. 576.

Archæobelus vellicatus Cope.

Cope, E. D. 1877 E, p. 192.

Case, E. C. 1900 A, p. 715, pl. iii, fig. 1.
Cope, E. D. 1877 N, p. 56. ("Species No. 4.")
 1881 K, p. 163.
 1888 BB, p. 287.
 Permian; Illinois.

LYSOROPHUS Cope. Type *L. tricarinatus* Cope.

Cope, E. D. 1877 E, p. 187.
Case, E. C. 1900 A, p. 714.
Cope, E. D. 1888 BB, p. 287. (*Lysorhophus*).
Miller, S. A. 1889 A, p. 623.
Zittel, K. A. 1890 A, p. 576.

Lysorophus tricarinatus Cope.

Cope, E. D. 1877 E, p. 187.

Baur and Case 1899 A, p. 2.
Case, E. C. 1900 A, pp. 714, 717, pl. ii, figs. 12a-13c.
Cope, E. D. 1881 K, p. 164.
 1888 BB, p. 287. (*Lysorhophus*).
 Permian; Illinois.

THEROPLEURA Cope. Type *T. retroversa* Cope.

Cope, E. D. 1878 B, p. 519.
Baur and Case 1899 A, p. 11.
Cope, E. D. 1880 A, p. 40.
 1888 BB, p. 287.
Miller, S. A. 1889 A, p. 626.
Nicholson and Lydekker 1889 A, p. 1060.
Seeley, H. G. 1889 A, p. 283.
Zittel, K. A. 1890 A, p. 576.

Theropleura obtusidens Cope.

Cope, E. D. 1880 A, p. 41.
Baur and Case 1899 A, p. 11.
Cope, E. D. 1881 K, p. 164.
 1888 BB, p. 287.
 Permian; Texas.

Theropleura retroversa Cope.

Cope, E. D. 1878 B, p. 519.

Cope, E. D. 1881 K, p. 163.
 1888 BB, p. 287.
 Permian; Texas.

Theropleura triangulata Cope.

Cope, E. D. 1878 B, p. 520.
 1881 K, p. 164.
 1888 BB, p. 287.
 Permian; Texas.

Theropleura uniformis Cope.

Cope, E. D. 1878 B, p. 519.
Baur and Case 1899 A, p. 11.
Cope, E. D. 1880 A, p. 40.
 1881 K, p. 163.
 1888 BB, p. 287.
 Permian; Texas.

OPHIACODON Marsh. Type *O. mirus* Marsh.

Marsh, O. C. 1878 C, p. 411.
 Baur and Case 1899 A, p. 5.
 Credner, H. 1888 A, p. 555.
 Miller, S. A. 1889 A, p. 624.
 Zittel, K. A. 1890 A, p. 574.

Ophiacodon grandis Marsh.

Marsh, O. C. 1878 C, p. 411.

Baur and Case 1899 A, p. 5. (Eryops?)
 Permian; New Mexico.

Ophiacodon mirus Marsh.

Marsh, O. C. 1878 C, p. 411.
 Baur and Case 1899 A, p. 5.
 Permian; New Mexico.

SPHENACODON Marsh. Type *S. ferox* Marsh.

Marsh, O. C. 1878 C, p. 410.
 Baur and Case 1899 A, p. 4.
 Credner, H. 1888 A, p. 555.
 Zittel, K. A. 1890 A, p. 574.

Sphenacodon ferox Marsh.

Marsh, O. C. 1878 C, p. 410.
 Baur and Case 1899 A, p. 4.
 Permian; New Mexico.

BOLOSOURIDÆ.

Cope, E. D. 1878 B, p. 529.
 1881 K, p. 164.
 1883 P.

Cope, E. D. 1888 BB, p. 288.
 Lydekker, R. 1890 A, p. 95.
 Nicholson and Lydekker 1889 A, p. 1060.

BOLOSOURUS Cope. Type *B. striatus* Cope.

Cope, E. D. 1878 B, pp. 506, 529.
 1878 U.
 1888 BB, p. 288.
 1890, in Lydekker, R. 1890 A, p. 95.
 Miller, S. A. 1889 A, p. 619.
 Nicholson and Lydekker 1889 A, p. 1060.
 Zittel, K. A. 1890 A, p. 582.

Bolosaurus striatus Cope.

Cope, E. D. 1878 B, p. 506.
 1878 U.
 1881 K, p. 164.
 1888 BB, p. 288.
 Permian; Texas.

METAMOSOURUS Cope. Type *M. fossatus* Cope.

Cope, E. D. 1878 B, p. 516.
 1888 BB, p. 288.
 Miller, S. A. 1889 A, p. 623.
 Zittel, K. A. 1890 A, p. 582.
 The position of this genus is uncertain.

Metamosaurus fossatus Cope.

Cope, E. D. 1878 B, p. 516.
 1881 K, p. 164.
 1888 BB, p. 288.
 Permian; Texas.

Order TESTUDINES Shaw.

Shaw, G. 1802, Gen. Zool., iii, p. 5.

Unless otherwise indicated, the following
 authors refer to this order under the name
Testudinata.

Agassiz, L. 1857 B.

Baur, G. 1885 E, p. 632. (Chelonia.)

1886 G, pp. 687, 740.

1887 A, p. 484.

1887 B.

1887 C, p. 97.

1887 E.

1887 F.

1888 A.

1888 B.

1889 B.

1889 C.

1889 F, p. 472.

1889 H.

1889 J.

1890 D.

1891 B, p. 417.

Baur, G. 1891 C.

1892 A.

1892 D, p. 206.

1893 A.

1893 B.

1894 A.

1895 A.

1895 D.

1896 A.

1896 B.

Bemmelen, J. F. 1896 A.

Bienz, A. 1895 A.

Born, G. 1880 A, p. 68.

Boulenger, G. A. 1889 A. (Chelonia.)

Calori, L. 1894 A.

Case, E. C. 1897 B. (Testudines.)

Cope, E. D. 1869 M, p. 27.

1871 B.

1873 E, p. 648.

1875 X, p. 16.

1882 E, p. 143.

- Cope, E. D. 1882 J, p. 986.
 1884 O, p. 111.
 1885 G, p. 246.
 1887 S, p. 334.
 1889 R, p. 863.
 1891 N, p. 39.
 1892 R.
 1892 Z, p. 20.
 1895 E.
 1896 A.
 1896 I.
 1898 B, pp. 55, 92.
 1900 A, p. 160.
- Cuvier, G. 1834 A, ix, pp. 347-496, pls. ccxxxix-cxxliii.
- Dollo, L. 1884 A.
 1886 A. (Rhynchochelones, or Euchelonia.)
 1888 C.
 1893 C, p. 253. ("Chéloniens.")
- Fürbringer, M. 1900 A, pp. 311, 527, 540, 556, 593, 630 (Chelonia.)
- Gadow, H. 1889 A, p. 462.
 1896 A, p. 41.
 1898 A, p. 20. (Chelonia.)
 1899 A, p. 35.
- Gaupp, E. 1894 A.
 1895 B, p. 58.
- Gegenbaur, C. 1864 A.
 1865 B, p. 35.
 1898 A.
- Goette, A. 1899 A, p. 407.
- Gray, J. E. 1869 B.
 1873 B.
- Günther, A. 1877 A.
 1886 A, p. 445.
 1888 A, p. 456. (Chelonia.)
- Haeckel, E. 1895 A, p. 316. (Chelonia.)
- Hallmann, E. 1837 A, p. 22.
- Hay, O. P. 1898 F, p. 929. (Testudines.)
 1899 F, p. 682. (Testudines.)
- Haycraft, J. B. 1891 A. (Chelonia.)
- Hoffmann, C. K. 1876 A.
 1878 A.
 1879 A.
 1890 A.
- Hulke, J. W. 1892 A, p. 248.
- Huxley, T. H. 1872 A, p. 170. (Chelonia.)
- Kehner, F. A. 1876 A.
- Kehrer, G. 1886 A, p. 83.
- Köstlin, O. 1844 A.
- Lang and Rüttimeyer 1867 A.
- Leidy, J. 1871 C, p. 365.
- Lortet, L. 1892 A.
- Lydekker, R. 1889 D. (Chelonia.)
 1889 E. (Chelonia.)
 1889 G. (Chelonia.)
- Maack, G. A. 1869 A.
- Marsh, O. C. 1877 E. (Chelonia.)
- Mehnert, E. 1890 A.
- Meyer, H. 1860 D, p. 140.
- Mivart, St. G. 1886 A. (Chelonia.)
- Monks, S. P. 1878 A.
- Müller, J. 1831 A, p. 199. (Testudines.)
- Nicholson and Lydekker 1889 A, p. 1082. (Chelonia.)
- Owen, R. 1842 A, p. 160. (Chelonia.)
 1849 B. (Chelonia.)
 1849 C. (Chelonia.)
 1860 A, pp. 161-166. (Chelonia.)
 1866 A. (Chelonia.)
- Parker, W. K. 1864 A.
 1868 A, p. 133. (Chelonia.)
 1879 B, p. 63.
- Peters, W. 1839 B. ("Schildkröten.")
- Pictet, F. J. 1853 A, p. 435. ("Chéloniens.")
- Portis, A. 1882 A. (Chelonia.)
- Rosenberg, E. 1891 A.
- Rüttimeyer, L. 1873 A.
 1874 A.
- Seeley, H. G. 1880 A. (Chelonia.)
 1900 A, p. 641. ("Chéloniens.")
- Segond, L. A. 1873 A, p. 2, *et seq.* (Vernacular name.)
- Siebenrock, F. 1897 A.
 1898 A.
- Stannius, H. 1856 A. (Chelonia.)
- Steinmann and Döderlein 1890 A, p. 630.
- Strauch, A. 1890 A, p. 9. (Chelonia.)
- Tomes, C. 1898 A, p. 267. (Chelonia.)
- Wiedersheim, R. 1889 A, p. 438.
- Wieland, G. R. 1900 B, p. 413.
- Woodward, A. S. 1898 B, p. 170. (Chelonia.)
- Zittel, K. A. 1890 A, pp. 449, 500.

Suborder ATHECÆ Cope.

- Cope, E. D. 1871 B, p. 235.
- Baur, G. 1886 G, p. 687.
 1888 A.
 1889 A.
 1890 A.
- Boulenger, G. A. 1889 A, pp. 4, 7.
- Case, E. C. 1897 B, p. 21.
- Cope, E. D. 1875 X, p. 16.
 1891 I.
 1891 N, p. 39.
 1898 B, p. 62.
- Dames, W. 1894 A.
- Dollo, L. 1886 A, p. 79.
- Dollo, L. 1887 A.
 1888 C.
- Gadow, H. 1890 A, p. 21.
- Goette, A. 1899 A, p. 422. (Athece.)
- Günther, A. 1888 A, p. 456.
- Haeckel, E. 1895 A, pp. 319, 325. (Atheconia.)
- Hay, O. P. 1898 F.
- Lydekker, R. 1889 G, p. 223. (Athecata.)
- Seeley, H. G. 1880 B, p. 412. (Dermochelyidæ.)
- Steinmann and Döderlein 1890 A, p. 633.
- Strauch, A. 1890 A, p. 38. (Athece.)
- Woodward, A. S. 1887 C, p. 7.

DERMOCHELYIDÆ.¹

- Fitzinger*, 1843, Syst. Rept. (Dermatochelyidæ.)
Agassiz, L. 1857 B, p. 320. (Sphargididæ.)
Baur, G. 1886 G, p. 687.
 1887 E.
 1888 A.
 1889 A.
 1889 B, p. 42.
 1889 H, p. 55. (Dermochelys.)
 1889 J, p. 39.
 1890 D, p. 534.
 1893 B, p. 673.
 1896 B.
Bemmelen, J. F. 1896 A, p. 323.
 1896 B, p. 279.
Boulenger, G. A. 1888 A, p. 353.
 1889 A, pp. 4, 7. (Sphargididæ.)
Case, E. C. 1897 B.
Dames, W. 1894 A. (Sphargididæ.)
Dollo, L. 1887 A. (Sphargis.)
 1888 C. (Sphargididæ.)
Fürbringer, M. 1900 A, p. 632. (Sphargidæ.)
- Gervais*, P. 1872 A. (Sphargididæ.)
Goette, A. 1899 A, p. 422. ("Dermochelyden.")
Gray, J. E., 1825, Ann. Philos., x. (Sphargidæ.)
 1869 B, p. 224. (Sphargididæ.)
Günther, A. 1888 A, p. 456. (Sphargididæ.)
Hay, O. P. 1898 F, p. 931.
Hoffmann, C. K. 1890 A, with plates. (Sphargis.)
Kükenthal, W. 1890 B, p. 240.
 1890 C, p. 162.
Lydekker, R. 1889 G, p. 223.
Nicholson and *Lydekker* 1889 A, p. 1090.
Seeley, H. G. 1880 B.
Siebenrock, F. 1897 A. (Sphargididæ.)
Strauch, A. 1890 A, p. 38. (Sphargida.)
Vaillant, L. 1894 A. (Sphargididæ.)
Wieland, G. R. 1900 A, p. 237.
 1900 B, p. 413.
Winckler, T. C. 1869 A, p. 60. (Sphargis.)
Woodward, A. S. 1887 C. (Sphargis.)
Zittel, K. A. 1890 A, p. 517.

Suborder THECOPHORA² Dollo.

- Dollo*, L. 1886 A, pp. 79, 91.
Boulenger, G. A. 1889 A, pp. 4, 11.
Case, E. C. 1897 B.
Dollo, L. 1887 A.
 1888 C.
Fraas, E. 1889 A, p. 401. (Proganochelys.)
Gadow, H. 1898 A, p. 20.
Goette, A. 1899 A, p. 426.
- Günther*, A. 1888 A, p. 457. (Testudinata.)
Haeckel, E. 1895 A, p. 319.
Hay, O. P. 1898 F, p. 940.
Lydekker, R. 1889 G, p. 3. (Testudinata.)
Nicholson and *Lydekker* 1889 A, p. 1091. (Testudinata.)
Seeley, H. G. 1880 B, p. 412. (Aspidochelyidæ.)
Vaillant, L. 1894 A. (<Craspedota.)

Superfamily PLEURODIRA Cope.

- Cope*, E. D. 1869 M, p. 156.
Baur, G. 1887 B, p. 101.
 1888 B.
 1889 H.
 1889 J.
 1890 D, p. 535.
 1891 B, p. 420 (Pleurodira); p. 422 (Amphichelydia).
 1891 C, p. 351.
 1896 B, p. 566. (Amphichelydia.)
Boulenger, G. A. 1888 A.
 1889 A, pp. 5, 187.
 1889 B.
Cope, E. D. 1871 B, p. 236.
 1872 D.
 1891 N, p. 39.
 1898 B, p. 63.
Dollo, L. 1886 A.
- Duméril* and *Bibron*, 1835, Érp. Gén., ii, p. 175.
 ("Pleurodères.")
Fraas, E. 1889 A, p. 401. (Proganochelys.)
Fürbringer, M. 1900 A, p. 632.
Gadow, H. 1898 A, p. 21.
Goette, A. 1899 A, p. 430.
Günther, A. 1888 A, p. 458.
Haeckel, E. 1895 A, p. 329. (Pleurodera.)
Hay, O. P. 1898 F, p. 947.
Lydekker, R. 1889 G, p. 158 (Pleurodira); p. 204 (Amphichelydia).
Nicholson and *Lydekker* 1889 A, p. 1091 (Amphichelydia); p. 1094 (Pleurodira).
Peters, W. 1839 A. (Hydromedusa maximiliani.)
Quenstedt, F. A. 1889 A. (On Psammochelys.)
Siebenrock, F. 1898 A, p. 425.
Steinmann and *Döderlein* 1890 A, p. 638.
Zittel, K. A. 1890 A, pp. 449, 542.

¹ References are given to the literature of this family on account of the bearing it has on opinions regarding the evolution and classification of *Testudines*.

² This group as here understood is equivalent to that so called by Dollo, minus the *Trionychia*.

PLEUROSTERNIDÆ.

- Cope, E. D.* 1875 X, p. 17.
Baur, G. 1888 B, p. 420.
 1891 B, p. 424. (Pleurosternidæ); p. 428 (Baënidæ).
Cope, E. D. 1882 E, pp. 143, 145. (Baënidæ.)
 1884 O, p. 111 (Pleurosternidæ); pp. 111, 112 (Baënidæ).
 1898 B, p. 63. (Baënidæ; Pleurosternidæ.)
Dollo, L. 1886 A, p. 78. (Pleurosternidæ; Baënidæ.)

- Grabbe, A.* 1884 A. (Pleurosternon.)
Günther, A. 1888 A, p. 457. (Baënidæ.)
Lydekker, R. 1889 E. (Pleurosternum.)
 1889 G, p. 205.
Nicholson and Lydekker 1889 A, p. 1092.
Owen, R. 1853 B, p. 21. (Pleurosternon.)
Rütimeyer, L. 1873 A, p. 143. (Pleurosternon.)
Steinmann and Döderlein 1890 A, p. 639.
Woodward, A. S. 1898 B, p. 172. (Pleurosternum.)

COMPSEMYS Leidy. Type *C. victus* Leidy.

- Leidy, J.* 1856 Q, p. 312.
Baur, G. 1890 D, p. 534.
 1891 B, p. 411.
 1896 B, p. 565.
Cope, E. D. 1869 M, p. 124.
 1875 E, p. 91.
 1875 I.
 1875 W, p. 336.
 1877 F, p. 196.
 1882 E, p. 145.
 1884 O, p. 113.
Leidy, J. 1860 A, p. 152.
Lydekker, R. 1889 G, p. 137.
Marsh, O. C. 1890 E, p. 177. (Glyptops, type *G. ornatus*.)
Nicholson and Lydekker 1889 A, p. 1105.
Zittel, K. A. 1890 A, p. 534.

Compsemys lineolatus Cope.

- Cope, E. D.* 1874 C, p. 30. (Adocus?).
 1874 B, p. 454. (Adocus?).
 1875 E, pp. 92, 263, pl. vi, figs. 11, 12. (Adocus.)
 1877 G, p. 573.
 Cretaceous (Laramie); Montana, Colorado, Saskatchewan?.

Compsemys obscurus (Leidy).

- Leidy, J.* 1856 Q, p. 312. (Emys.)
Cope, E. D. 1869 M, p. 124.
 1874 C, p. 30.

- Cope, E. D.* 1875 E, p. 261.
 1877 G, p. 573. (Emys.)
Leidy, J. 1860 A, p. 153, pl. xi, fig. 4.
 Cretaceous (Laramie); Montana.
Compsemys plicatulus Cope.
Cope, E. D. 1877 F, p. 196.
Baur, G. 1890 D, p. 534.
 1891 B.
 1896 B, p. 565.
Marsh, O. C. 1890 E, p. 176, pl. vii. (Glyptops ornatus.)
 1897 C, p. 507, figs. 63, 64. (Glyptops ornatus.)
 Jurassic; Colorado, Wyoming.

Compsemys victus Leidy.

- Leidy, J.* 1856 Q, p. 312.
Cope, E. D. 1869 M, p. 124.
 1874 B, p. 454.
 1874 C, p. 30.
 1875 E, p. 261, pl. vi, figs. 15, 16.
 1875 I. (*C. victus*?)
 1877 G, p. 573.
Leidy, J. 1860 A, p. 152, pl. xi, figs. 5-7.
Marsh, O. C. 1897 C, p. 527.
 Cretaceous (Laramie); Montana, Colorado, Saskatchewan?.

Compsemys sp. indet.

- Cope, E. D.* 1888, CC, p. 301.
 Eocene (Puerco); New Mexico.

BAËNA Leidy. Type *B. arenosa* Leidy.

- Leidy, J.* 1871 C, p. 367.
Baur, G. 1888 B, p. 422.
 1889 H, p. 58.
 1891 B, p. 425.
Cope, E. D. 1873 E, p. 621.
 1882 E, p. 145.
 1882 J, p. 990.
 1884 O, pp. 112, 144.
 1886 M.
Günther, A. 1888 A, p. 456.
Leidy, J. 1872 L, p. 162. (Chisternon, type *Baëna undata*.)
 1873 B, p. 160 (Baëna); p. 169 (Chisternon).
 1873 S, p. 123.
Nicholson and Lydekker 1889 A, p. 1093.
Steinmann and Döderlein 1890 A, p. 637.
Zittel, K. A. 1890 A, p. 536.

Baëna arenosa Leidy.

- Leidy, J.* 1870 S, p. 123.
Baur, G. 1891 B, p. 427.
Cope, E. D. 1873 E, p. 623.
 1875 C, p. 36.
 1875 F, p. 96.
 1877 K, p. 52, pl. xxiv, fig. 32.
 1882 J, p. 990, fig. 8.
 1884 O, p. 148, pl. xvii, figs. 1, 2.
Dollo, L. 1888 A, pl. ii, fig. 11.
King, C. 1878 A, p. 404.
Leidy, J. 1871 C, p. 367. (*B. arenosa*, *B. affinis*.)
 1871 K, p. 229.
 1872 B, p. 368.
 1873 B, pp. 161, 341, pl. xiii, figs. 1-5.
 Eocene (Bridger); Wyoming; (Wasatch); New Mexico.

Baëna hebraica Cope.

- Cope, E. D.* 1872 M, p. 463.
 1873 E, p. 621.
 1884 O, p. 146, pl. xix, figs. 1, 2.
 Eocene (Bridger); Wyoming.

Baëna? *ponderosa* Cope.

- Cope, E. D.* 1873 E, p. 624.
 1884 O, p. 150, pl. xvii, figs. 3-8.
 Eocene (Bridger); Wyoming.

Baëna undata Leidy.

- Leidy, J.* 1871 K, p. 228.
Cope, E. D. 1873 E, p. 622.
 1884 O, p. 147, pl. xix, figs. 3-5.
Leidy, J. 1871 B, p. 373.
 1872 B, p. 369.
 1872 L, p. 162. (Chisternon.)
 1873 B, pp. 169, 341, pl. xiv, figs. 1, 2. (Chisternon.)
 Osborn, Scott, and Speir 1878 A, p. 96.
 Eocene (Bridger); Wyoming.

POLYTHORAX Cope. Type *P. missouriensis* Cope.

- Cope, E. D.* 1876 H, p. 258.
 1882 E, p. 145.
 1884 O, p. 112.
 Nicholson and Lydekker 1889 A, p. 1093.

Polythorax missouriensis Cope.

- Cope, E. D.* 1876 H, p. 258.
 1877 G, p. 573.
 Cretaceous (Laramie); Montana.

PELOMEDUSIDÆ.

- Cope, E. D.* 1868 B, p. 282.
Baur, G. 1888 B, p. 420. (Pelomedusidæ, Podocnemidæ.)
 1891 B, p. 424. (Bothremydidæ.)

- Boulenger, G. A. 1889 A, p. 191.
 Lydekker, R. 1889 G, p. 170.
 Nicholson and Lydekker 1889 A, p. 1099.
 Steinmann and Döderlein 1890 A, p. 639.

BOTHREMYS Leidy. Type *B. cookii* Leidy.

- Leidy, J.* 1865 A, pp. 110, 120.
Baur, G. 1889 J, p. 38.
 1891 B, p. 423.
Cope, E. D. 1867 A, p. 40.
 1869 M, pp. 148, 157.
Günther, A. 1888 A, p. 457.
Lydekker, R. 1889 G, p. 174.
 Nicholson and Lydekker 1889 A, p. 1099.
 Zittel, K. A. 1890 A, p. 547.

Bothremys cookii Leidy.

- Leidy, J.* 1865 A, pp. 110, 120, pl. xviii, figs. 4-8.
Cope, E. D. 1869 B, p. 735.
 1869 K, p. 89.
 1869 M, p. 157.
 1875 E, p. 263.
Leidy, J. 1865 D, p. 73.
 Maack, G. A. 1869 A, p. 280.
 Cretaceous (Green-sand No. 4); New Jersey.

TAPHROSPHYS Cope. Type *T. molops* Cope.

- Cope, E. D.* 1869 K, p. 90.
Baur, G. 1888 B, p. 421.
 1891 B, p. 424.
Cope, E. D. 1869 K, p. 90. (Prochionias, type *Platemys sulcatus* Leidy).
 1869 M, p. 157.
 1873 E, p. 649.
Günther, A. 1888 A, p. 457.
Lydekker, R. 1889 G, p. 174.
 Nicholson and Lydekker 1889 A, p. 1099.
 Zittel, K. A. 1890 A, p. 547. (Syn. of Bothremys).

Taphrosphys leslianus Cope.

- Cope, E. D.* 1869 M, pp. 159, 166 (Taphrosphys); p. 165, line 14 (Prochionias).
 1875 E, p. 264.
 Cretaceous (Green-sand); New Jersey.

Taphrosphys longinuchus Cope.

- Cope, E. D.* 1869 M, pp. 159, 162.
 1875 E, p. 263.
 Cretaceous (Green-sand); New Jersey.

Taphrosphys molops Cope.

- Cope, E. D.* 1869 M, pp. 158, 159, figs. 43, 44.
 1869 B, p. 735.
 1869 K, p. 89.
 1869 M, pp. 158, 160 (Prochionias enodis); p. 162 (T. molops, var. enodis).
 1870 D, p. 274.
 1875 E, p. 263.
 Zittel, K. A. 1890 A, p. 547. (Bothremys.)
 Cretaceous (Green-sand); New Jersey.

Taphrosphys nodosus Cope.

- Cope, E. D.* 1869 M, pp. 159, 167, pl. i, fig. 16.
 1875 E, p. 264.
 Cretaceous (Green-sand); New Jersey.

Taphrosphys strenuus Cope.

- Cope, E. D.* 1869 K, pp. 89, 90. (Prochionias.)
 1869 B, p. 735. (T. princeps.)
 1869 K, p. 89. (Prochionias princeps.)
 1869 M, pp. 160, 167 (Prochionias princeps); p. 159, 166 B (Taphrosphys); p. 167 (Prochionias).

Cope, E. D. 1875 E, p. 264.

1875 V, p. 34.

1878 EE.

Cretaceous (Green-sand); New Jersey, Georgia, North Carolina.

Cope's species *T. princeps* is last mentioned, and then only incidentally, in 1869 M, pp. 160, 167. It appears to have been regarded by Cope as a synonym of *T. strenuus*. In the Cope collection of reptiles the present writer has found the femur described on p. 166-B of Cope 1869M, and it has written on it, probably by Cope himself, the name "*Prochonias princeps*."

Taphrosphys sulcatus (Leidy).

Leidy, J. 1856 P, p. 303. (Platemys.)

Cope, E. D. 1869 B, p. 735.

1869 K, pp. 89, 90. (Prochonias.)

1869 M, pp. 159, 164, text figs. 45, 45 bis (Taphrosphys); p. 165 (Prochonias).

1875 E, p. 264.

Leidy, J. 1865 A, pp. 109, 120, pl. xix, fig. 4. (Platemys.)

Maack, G. A. 1869 A, p. 281. (Platemys.)

Cretaceous (Green-sand); New Jersey.

PLESIOCHELYIDÆ.

Lydekker, R. 1889 G, p. 183.

PLESIOCHELYS Rütimeyer. Type *P. solodurensis* Rütimeyer.

Rütimeyer L. 1873 A. p. 48.

Lydekker, R. 1889 D, p. 239.

1889 G, p. 196.

Maack, G. A. 1869 A, p. 320. (Stylemys in part; not of Leidy.)

Portis, A. 1878 A, p. 131.

Zittel, K. A. 1890 A, p. 544.

Plesiochelys belviderensis Cragin.

Cragin, F. W. 1894 A, p. 71, pl. ii, figs. 1-8.

Cretaceous (Comanche series); Kansas.

Superfamily CRYPTODIRA Cope.

Cope, E. D. 1869 M, p. 123.

Baur, G. 1889 H.

1889 J.

1890 D, p. 535.

1891 B, p. 419.

1893 B.

Boulenger, G. A. 1889 A, pp. 4, 11.

1889 B.

Cope, E. D. 1871 B, p. 235.

1884 O, p. 111.

1891 N, p. 39.

1898 B, p. 62.

Dollo, L. 1886 A.

Duméril and Bibron, 1835, Érp. Gén., ii, p. 172. ("Cryptodères.")

Fürbringer, M. 1900 A, p. 632.

Gadow, H. 1898, p. 20.

Goette, A. 1899 A, p. 430.

Günther, A. 1888 A, p. 457.

Hay, O. P. 1898 F, p. 947.

Lydekker, R. 1889 G, p. 25.

Nicholson and Lydekker 1889 A, p. 1101.

Williston, S. W., in Williston and Case 1898 A, p. 367.

Zittel, K. A. 1890, pp. 449.

PROTOSTEGIDÆ.

Cope, E. D. 1873 E, p. 649.

Baur, G. 1888 A.

1889 A, pp. 184, 191.

1890 D, p. 534.

Case, E. C. 1897 B.

Cope, E. D. 1875 X, p. 16.

Lydekker, R. 1889 G, p. 228.

Nicholson and Lydekker 1889 A, p. 1089.

Steinmann and Döderlein 1890 A, p. 634.

Wieland, G. R. 1898 A, p. 19.

1900 A, p. 250.

PROTOSTEGA Cope. Type *P. gigas* Cope.

Cope, E. D. 1871 K, p. 175.

Baur, G. 1886 G, p. 687.

1889 A.

1890 D.

1896 B.

Capellini, G. 1884 A.

Case, E. C. 1897 B.

Cope, E. D. 1872 F, p. 334.

1872 L.

1873 E, p. 648.

1875 E, pp. 99, 256.

1884 O, p. 114.

Dollo, L. 1888 C, p. 72.

Goette, A. 1899 A, p. 426.

Hay, O. P. 1895 B.

1898 F, p. 929.

Lydekker, R. 1889 G, pp. vii, 229.

Marsh, O. C. 1877 E, p. 345. (Atlantochelys.)

1877 F. (Atlantochelys.)

Nicholson and Lydekker 1889 A, p. 1089.

Wieland, G. R. 1900 A, pp. 237, 250.

1900 B, p. 416.

Woodward, A. S. 1887 C, p. 9.

Zittel, K. A. 1890 A, p. 519.

Protostega gigas Cope.

- Cope, E. D. 1871 K, p. 175.
 Capellini, G. 1884 A.
 Case, E. C. 1897 B, pls. iv-vi.
 Cope, E. D. 1872 F, pp. 323, 335.
 1872 L, p. 433.
 1875 E, pp. 48, 102, 256, pl. ix, figs. 1-7; pls.
 x-xiii.
 1878 Q.

- Dana, J. D. 1876, Man. Geol., ed. ii, p. 466. (Atlantochelys.)
 Hay, O. P. 1895 B, pls. iv, v.
 Sternberg, C. 1899 A, p. 126, figures.
 Wieland, G. A. 1896 A.
 1898 A.
 1900 A, p. 238.
 1900 B, p. 416, figs. 8, 19.
 Cretaceous (Niobrara); Kansas.

ARCHELON Wieland. Type *A. ischyros* Wieland.

- Wieland, G. R. 1896 A, p. 399.
 Hay, O. P. 1898 F, p. 929. (Protostega.)
 Wieland, G. R. 1898 A, p. 15. (Protostega.)
Archelon ischyros Wieland.
 Wieland, G. R. 1896 A, p. 399, pl. vi, text figs. 2-19.
 Case, E. C. 1897 B, p. 52. (Protostega.)
 Wieland, G. R. 1898 A, p. 15, pl. ii, text figs. 1, 2
 (Protostega.)

- Wieland, G. R. 1900 A, p. 237, pl. ii, text figs. 1-3; 6.
 1900 B, p. 420, figs. 17, 18.
 Williston, S. W. 1897 H, p. 246. (Protostega.)
 Cretaceous (Pierre); South Dakota.

Archelon marshii Wieland.

- Wieland, G. R. 1900 A, p. 248.
 Cretaceous (Pierre); South Dakota.

NEPTUNOCHELYS Wieland. Type *Protostega tuberosa* Cope.

- Wieland, G. R. 1900 B, p. 418.
Neptunochelys tuberosa (Cope).
 Cope, E. D. 1872 L, p. 433. (Platecarpus, *errore*.)
 Baur, G. 1889 A, p. 189.
 Cope, E. D. 1869 A, p. 265. (Platecarpus tympaniticus, in part.)
 1869 M, pp. 199, 200. (Platecarpus tympaniticus, in part.)

- Cope, E. D. 1872 F, p. 334. (Protostega.)
 1875 E, p. 257. (Protostega.)
 Leidy, J. 1865 A, p. 118, pl. viii, figs. 1, 2. (?Hodocodus acutidens, in part.)
 1873 B, p. 342. (Atlantochelys.)
 Wieland, G. R. 1900 B, p. 418, figs. 9, 10. (Neptunochelys.)
 Cretaceous; Mississippi.

ATLANTOCHELYS Agassiz. Type *A. mortoni* Agassiz.

- Agassiz, L., in Leidy, J. 1865 A, p. 43.
 1849 A, p. 169. (No definition.)
 1850 B. (No definition.)
 Baur, G. 1889 A, p. 189.
 Cope, E. D. 1869 M, p. 185.
 Dollo, L. 1888 C, p. 67.
 Hay, O. P. 1898 F, p. 930.
 Leidy, J. 1873 B, p. 342.
 Lydekker, R. 1889 G, p. 229.
 Marsh, O. C. 1877 E, p. 345.
 1877 F.

Atlantochelys mortoni Agassiz.

- Agassiz, L., in Leidy, J. 1865 A, p. 43, pl. viii, figs. 3-5.

- Agassiz, L. 1849 A, p. 169. (No description.)
 1850 B. (No description.)
 Baur, G. 1889 A, p. 189. ("Protostega neptunia.")
 Cope, E. D. 1869 M, p. 185.
 1872 F, p. 334. (Protostega neptunia.)
 1872 L, p. 433. (Protostega neptunia.)
 1873 E. (Protostega neptunia.)
 Hay, O. P. 1898 F, p. 930.
 Leidy, J. 1865 A, p. 117. (Mosasaurus mitchelli, in part.)
 1873 B, p. 342.
 Wieland, G. R. 1900 B, p. 419, figs. 14-16.
 Cretaceous; New Jersey.

THALASSEMYDIDÆ.

- Baur, G. 1889 A, p. 191. (Thalassemydidæ, Lytolomidæ.)
 Cope, E. D. 1869 M, p. 235. (Propleuridæ.)
 1870 T, p. 137. (Propleuridæ.)
 1871 C, p. 563. (Propleuridæ.)
 1872 B, p. 22. (Propleuridæ.)
 1872 D. (Propleuridæ.)
 1879 A, p. 36. (Propleuridæ.)
 1882 E, pp. 143, 144. (Propleuridæ.)
 1882 J, p. 989. (Propleuridæ.)
 1884 O, pp. 111, 112. (Propleuridæ.)

- Cope, E. D. 1887 R. (Propleuridæ.)
 Dollo, L. 1884 A, p. 71. (Thalassemydidæ.)
 1886 A, p. 89. (Cheloniidæ, in part.)
 1888 A. (Propleuridæ.)
 Lortet, L. 1892 A, p. 24. (Thalassemydidæ.)
 Lydekker, R. 1889 A, p. 36. (Propleuridæ.)
 1889 G, p. 25. (Cheloniidæ, in part.)
 Nicholson and Lydekker 1889 A, p. 1112. (Cheloniidæ.)
 Zittel, K. A. 1890 A, p. 525 (Chelonemydidæ);
 p. 527 (Thalassemydidæ).

OSTEOPYGIS Cope. Type *O. emarginatus* Cope.

Cope, *E. D.* 1868 E, p. 147.

Baur, G. 1889 A, p. 186.

1889 B, p. 42.

Case, E. C. 1897 B, pp. 33, 43, 50.

Cope, E. D. 1869 K, p. 88. (Osteopygis; Propleura, type *Chelone sopita* Leidy.)

1869 M, pp. 132, 235 (Osteopygis); pp. 138, 235 (Propleura); pp. 143, 235 (Catapleura, type *C. repanda*).

1875 E, p. 257.

1882 E, p. 144. (Osteopygis, Propleura, Catapleura.)

1884 O, p. 112. (Osteopygis, Propleura, Catapleura.)

Lydekker R. 1889 A, p. 61.

1889 D, p. 233. (Lytoloma.)

1889 G, p. 52. (Syn.? of Lytoloma.)

Nicholson and Lydekker 1889 A, p. 1113. (Lytoloma.)

Zittel, K. A. 1890 A, p. 526.

Osteopygis chelydrinus Cope.

Cope, *E. D.* 1869 K, p. 89.

1868 E, p. 147. (No description.)

1869 B, p. 735. (No description.)

1869 M, pp. 135, 138, pl. vii, fig. 8.

1875 E, p. 259. (Catapleura.)

Cretaceous; New Jersey.

Osteopygis emarginatus Cope.

Cope, *E. D.* 1869 K, p. 89.

1869 B, p. 735.

1868 E, p. 147. (No description.)

1869 M, pp. 135, 136, 235, pl. vii, fig. 3.

1875 E, p. 259.

Cretaceous; New Jersey.

Osteopygis erosus Cope.

Cope, *E. D.* 1875 E, p. 258.

Cretaceous; New Jersey.

Osteopygis platylomus Cope.

Cope, *E. D.* 1869 K, p. 89.

1869 B, p. 735.

1869 M, pp. 135, 137, and ii, figs. 38, 39.

1875 E, p. 258.

Cretaceous; New Jersey.

Osteopygis ponderosus (Cope).

Cope, *E. D.* 1871 G, p. 46. (Catapleura.)

1875 E, p. 259. (Catapleura.)

Cretaceous; New Jersey.

Osteopygis repandus (Cope).

Cope, *E. D.* 1869 M, p. 142, pl. vii, fig. 2. (Catapleura.)

1868 E. (Osteopygis; no description.)

1869 B, p. 734. (Propleura; no description.)

1875 E, p. 259. (Catapleura.)

Cretaceous; New Jersey.

Osteopygis sopitus (Leidy).

Leidy, J. 1865 A, pp. 104, 119. (Chelone; not p. 105, pl. xix, fig. 5 = *Lytoloma angusta* Cope.)

Cope, *E. D.* 1868 E, p. 147. (Osteopygis.)

1869 B, p. 735. (Propleura.)

1869 K, p. 88. (Propleura.)

1869 M, pp. 140, 235, pl. vii, figs. 4-7. (Propleura.)

1875 E, p. 258.

Maack, G. A. 1869 A, pp. 233, 283. (Chelone.)

Cretaceous; New Jersey.

PERITRESIUS Cope. Type *Chelone ornata* Leidy.

Cope, *E. D.* 1869 K, p. 88.

1869 M, p. 150.

1882 E, p. 144.

1884 O, p. 112.

Zittel, K. A. 1890 A, p. 526.

The systematic position of this genus is doubtful.

Peritresius ornatus (Leidy.)

Leidy, J. 1856 P, p. 303. (Chelone.)

Cope, *E. D.* 1869 B, p. 735.

1869 K, p. 88.

1869 M, p. 150.

1875 E, p. 260.

1878 EE.

Leidy, J. 1865 A, pp. 105, 119, pl. xviii, fig. 10. (Chelone.)

Maack, G. A. 1869 A, p. 283. (Chelone.)

Cretaceous; New Jersey, Georgia.

LYTOLOMA Cope. Type *L. angusta* Cope.

Cope, *E. D.* 1869 K, p. 88.

Baur, G. 1889 B, p. 43.

1889 J, p. 39. (Euclastes.)

Case, E. C. 1897 B, pp. 44, 50.

Cope, *E. D.* 1867 A, p. 39. (Euclastes, type *E. platyops*.)

1869 M, pp. 131, 144, 235 (Lytoloma); pp. 131, 148 (Euclastes).

1882 E, p. 144.

1884 O, p. 112.

1887 R.

Dames, W. 1894 A, p. 203.

Dollo, L. 1888 A.

Lydekker, R. 1889 A, p. 61.

1889 D, p. 233.

1889 G, p. 51.

Nicholson and Lydekker 1889 A, p. 1113.

Seeley, H. G. 1871 B. (Glossochelys, type *E. harricensis*.)

Wieland, G. R. 1900 B, p. 416, fig. 6.

Zittel, K. A. 1890 A, p. 526. (Euclastes.)

Lytoloma angusta Cope.Cope, *E. D.* 1869 K, p. 89.

1869 M, p. 145, pl. xi, fig. 1.

1875 E, p. 257.

Leidy, J. 1865 A, p. 105, pl. xix, fig. 5. (Chelonae
sopita, in part.)

Cretaceous (Green-sand No. 5); New Jersey.

Lytoloma jeanesii Cope.Cope, *E. D.* 1869 M, p. 145.

1869 B, p. 735. (Propleura; no description.)

1875 E, p. 257.

Cretaceous (Green-sand No. 5); New Jersey.

Lytoloma platyops (Cope.)Cope, *E. D.* 1867 A, p. 41. (Euclastes.)

1869 B, p. 735. (Euclastes.)

1869 K, p. 89. (Euclastes.)

1869 M, p. 149, pl. vii, fig. 9. (Euclastes.)

1875 E, p. 259. (Euclastes.)

Cretaceous (Green-sand No. 5); New Jersey.

Lytoloma sp. indet.

Clark, W. B. 1895 A, p. 4. (Euclastes.)

1897 A, p. 59. (Euclastes.)

Eocene; Maryland.

SYLLOMUS Cope. Type *S. crispatus* Cope.Cope, *E. D.* 1896 J, p. 139.**Syllomus crispatus** Cope.Cope, *E. D.* 1896 J, p. 139.

Neocene; Virginia.

TOXOCHELYIDÆ.

Baur, G. 1895 D, p. 569. (Toxochelydæ.)

1896 B, p. 564.

Hay, O. P. 1896 A, p. 106.

TOXOCHELYS Cope. Type *T. latiremis* Cope.Cope, *E. D.* 1873 I, p. 10.

Baur, G. 1889 H, p. 58.

1895 D, p. 569.

Case, E. C. 1897 B, p. 28.

1893, in Williston and Case 1898 A, p. 370.

Cope, *E. D.* 1872 BB. (No name.)

1875 E, pp. 98, 300.

1877 D, p. 176.

Hay, O. P. 1896 A.

1898 F, p. 935.

Lydekker, R. 1889 G, p. 129.

Nicholson and Lydekker 1889 A, p. 1104.

Wieland, G. R. 1900 B, p. 418.

Zittel, K. A. 1890 A, pp. 526, 534.

Toxochelys brachyrhinus Case.Case, *E. C.*, in Williston and Case 1898 A, p. 378, pl.
lxxxiv.

Cretaceous; Kansas.

Toxochelys latiremis Cope.Cope, *E. D.* 1873 I, p. 10.Case, E. C., in Williston and Case 1898 A, p. 371,
pl. lxxix; pl. lxxx, figs. 1, 2; pl. lxxxi, figs. 1-8,
10-13; pl. lxxxii, figs. 1-3, 6; pl. lxxxiii, figs.
2-4.Cope, *E. D.* 1872 BB, p. 129. (Description; no
name.)

1875 E, pp. 98, 260, pl. viii, fig. 12.

1877 D, p. 176.

Hay, O. P. 1896 A, pls. xiv, xv.

Leidy, J. 1873 B, p. 279, pl. xxxvi, figs. 17-21.

(Cynocercus incisus.)

Wagner, G. 1898 A, p. 201, text figs. 1, 2.

Wieland, G. R. 1900 B, p. 418.

Cretaceous (Niobrara and Pierre); Kansas.

Toxochelys serrifer Cope.Cope, *E. D.* 1875 E, p. 299.Case, E. C., in Williston and Case 1898 A, p. 379, pl.
lxxx, figs. 3-9; pl. lxxxii, figs. 4, 5; pl. lxxxiii,
fig. 1.

Hay, O. P. 1898 F, p. 935, figs. 1-3.

Cretaceous (Niobrara); Kansas.

CYNOCERCUS Cope. Type *C. incisus* Cope.Cope, *E. D.* 1882 H.

1872 F, p. 335.

1875 E, p. 96.

Hay, O. P. 1896 A.

Williston, S. W., in Williston and Case 1898 A,
p. 368.

Zittel, K. A. 1890 A, p. 526.

This genus is not improbably identical with
Toxochelys. If so, *Cynocercus* supersedes *Toxo-*
chelys.**Cynocercus incisus** Cope.Cope, *E. D.* 1872 H.

1872 F, p. 335.

1872 BB, p. 129.

1874 C, p. 28.

1875 E, pp. 96, 260, pl. viii, figs. 3-5.

Williston, S. W., in Williston and Case 1898 A, p.
368, fig. 6.

Cretaceous (Niobrara); Kansas.

DESMATOCHELYIDÆ.

Williston, S. W. 1894 D.

Williston, S. W., in Williston and Case 1898 A,
p. 367.

DESMATOCHELYS Willist. Type *D. lowii* Willist.*Williston, S. W.* 1894 D.

1898, in Williston and Case 1898 A, p. 351.

Desmatochelys lowii Willist.*Williston, S. W.* 1894 D.*Wieland, G. R.* 1900 B, p. 419, fig. 13.*Williston, S. W.*, in Williston and Case 1898 A, p. 353. pls. lxxiii-lxxviii.

Cretaceous (Niobrara); Nebraska, Kansas.

CHELONIIDÆ.

Gray, J. E., 1825, Ann. Phil. (2), x. (Cheloniadæ.)*Agassiz, L.* 1857 B, p. 324. (Chelonoidæ.)*Baur, G.* 1889 A.

1889 B.

1890 F, p. 486.

1891 C, p. 350.

1893 B, p. 673.

Bemmelen, J. F. 1896 A.*Boulenger, G. A.* 1889 A, p. 180.*Case, E. C.* 1897 B.*Cope, E. D.* 1869 M, p. 153.

1871 C, p. 130.

1872 D.

1882 E, p. 143.

1884 O, p. 111.

Dollo, L. 1888 C.*Gadow, H.* 1899 A, p. 37.*Goette, A.* 1899 A.*Gray, J. E.* 1873 B, p. 396.*Günther, A.* 1888 A, pp. 457, 458.*Hay, O. P.* 1896 A.

1898 F, p. 931.

Hoffmann, C. K. 1890 A.*Lydekker, R.* 1889 G, p. 25.*Nicholson and Lydekker* 1889 A, p. 1111.*Owen, R.* 1842 A, p. 168.*Pictet, F. J.* 1853 A, p. 458. (Chélonées.)*Siebenrock, F.* 1897 A.

1898 A, p. 425.

Steinmann and Döderlein 1890 A, p. 636.*Strauch, A.* 1890 A, p. 37.*Zittel, K. A.* 1890 A, p. 521.

CHELONIA Brongniart.

Brongniart, A., 1799, Jour. de Science, etc., v, pp. 184, 201.*Agassiz, L.* 1857 B, p. 377.*Baur, G.* 1889 A.

1889 F, p. 467.

1890 F, p. 486.

1896 B.

Bemmelen, J. F. 1896 B. (Chelone.)*Boulenger, G. A.* 1889 A, p. 180. (Chelone.)*Cope, E. D.* 1882 E, p. 144.

1884 O, p. 112.

Dollo, L. 1888 A. (Chelone.)*Fürbringer, M.* 1900 A. (Chelone.)*Hoffmann, C. K.* 1890 A.*Lydekker, R.* 1889 A, p. 60. (Chelone.)

1889 D. (Chelone.)

1889 G, p. 27. (Chelone.)

Owen, R. 1842 A, p. 168. (Chelone.)

1849 B. (Chelone.)

Owen, R. 1849 C. (Chelone.)

1851 B, p. 1. (Chelone.)

Peters, W. 1839 B.*Pictet, F. J.* 1853 A, p. 459.*Segond, L. A.* 1873 A, p. 2. ("Tortue franche.")*Stannius, H.* 1856 A.*Strauch, A.* 1890 A, p. 37. (Chelone.)*Ubaghs, C.* 1875 A.*Winckler, T. C.* 1869 A.*Zittel, K. A.* 1890 A, p. 523.

No species certainly belonging to this genus have yet been described from North America. For *Chelonia couperi* see Harlan, R. 1842 B, p. 144, pl. iii, figs. 2, 3; but it is probable that the bone there described and figured is not even a portion of a turtle. See also J. H. Couper in Hodson, W. B. 1846 A, p. 46, for mention of this supposed turtle.

PUPIGGERUS Cope. Type *Chelone grandæva* Leidy.*Cope, E. D.* 1869 M, p. 235.

1882 E, p. 144.

1884 O, p. 112.

Günther, A. 1888 A, p. 457.*Lydekker, R.* 1889 A, p. 61.1889 D, p. 254. (Syn. of *Lytoloma*.)1889 G, p. 52. (Syn. of *Lytoloma*.)*Nicholson and Lydekker* 1889 A, p. 1113.*Zittel, K. A.* 1890 A, p. 527.**Puppigerus grandævus** (Leidy.)*Leidy, J.* 1851 H, p. 329. (Chelonia.)*Cope, E. D.* 1869 B, p. 738. (Chelone.)

1869 M, p. 153 (Chelone); p. 235 (Puppigerus).

Cope, E. D. 1875 H, p. 363.*Leidy, J.* 1856 P, p. 303. (Chelone.)*Maack, G. A.* 1869 A, p. 283. (Chelone.)

Miocene; New Jersey.

Puppigerus parvitectus Cope.*Cope, E. D.* 1869 M, p. 155. (Chelone parvitecta.)

1867 C, p. 143. ("Sp. undet.")

1869 B, p. 738. (Chelone parviscutum; no description.)

1870 T, p. 138. (Chelone parviscutatus.)

1872 Y, p. 15.

Miocene; New Jersey, Maryland.

LEMBONAX Cope. Type *L. polemicus* Cope.

Cope, *E. D.* 1869 M, p. 168.

1882 J, p. 989.

Zittel, K. A. 1890 A, p. 524.

The position of this genus is very problematical.

Lembonax insularis Cope.

Cope, *E. D.* 1872 Y, p. 16.

Eocene; New Jersey.

Lembonax polemicus Cope.

Cope, *E. D.* 1869 M, p. 168.

Eocene; New Jersey.

Lembonax prophylæus Cope.

Cope, *E. D.* 1872 Y, p. 15.

Eocene; New Jersey.

ADOCIDÆ.

Cope, *E. D.* 1870 K.

Baur, G. 1888 B, p. 419.

1891 B, p. 430.

Bienze, A. 1895 A. (On Dermatemydidae.)

Cope, *E. D.* 1869 M (1870), p. ii.

1870 N.

1871 G, p. 563.

1871 G, p. 43.

1872 D.

Cope, *E. D.* 1873 E, p. 649.

1875 X, p. 17.

1882 E, p. 145.

1884 O, pp. 111, 113.

1891 F, p. 645.

Dollo, L. 1886 A, p. 78.

Lydekker, R. 1889 G, p. 129.

Nicholson and Lydekker 1889 A, p. 1106.

Adocus Cope. Type *Emys beatus* Leidy.

Cope, *E. D.* 1868 K, p. 235.

Baur, G. 1891 B, p. 428.

Cope, *E. D.* 1869 K, p. 88.

1869 M, pp. 128, 232, and ii.

1870 G.

1870 K.

1873 E, p. 649.

1875 E, pp. 91, 262.

1882 E, p. 145.

1884 O, p. 113.

1891 F, p. 645.

Günther, A. 1888 A, p. 457.

Lydekker, R. 1889 G, p. 129.

Nicholson and Lydekker 1889 A, p. 1106.

Steinmann and Döderlein 1890 A, p. 637.

Zittel, K. A. 1890 A, p. 536.

Cope, *E. D.* 1870 N, p. 547.

1871 G, p. 43.

1875 E, p. 262.

Marsh, O. C. 1890 E, p. 178, pl. vii, fig. 3. (*A. punctatus*.)

Cretaceous (Green-sand No. 5); New Jersey.

Adocus pectoralis Cope.

Cope, *E. D.* 1868 K, p. 236. (Pleurosternum.)

1869 B, p. 734. (Pleurosternum.)

1869 M, p. 130 (Pleurosternum); p. 233 and ii, pl. vii, fig. 1 (*Adocus*).

1870 G, p. 296.

1871 G, p. 43.

1875 E, p. 262.

Cretaceous (Green-sand No. 5); New Jersey.

Adocus pravus (Leidy).

Leidy, J. 1856 P, p. 303. (Emys.)

Cope, *E. D.* 1868 K, p. 235.

1869 B, p. 734.

1869 M, pp. 129, 233, 234.

1870 G, p. 297.

1871 G, p. 44.

1875 E, p. 262.

Leidy, J. 1865 A, pp. 108, 120, pl. xix, fig. 1. (Emys.)

Maack, G. A. 1869 A, p. 278. (Emys parva.)

Cretaceous (Green-sand No. 5); New Jersey.

Adocus syntheticus Cope.

Cope, *E. D.* 1870 N, p. 548.

1870 K.

1871 G, p. 44.

1875 E, p. 262.

Cretaceous (Green-sand No. 5); New Jersey.

AGOMPHUS Cope. Type *Emys turgidus* Cope.

Cope, *E. D.* 1871 G, p. 46.

Baur, G. 1888 B, p. 595.

1891 B, p. 429.

Cope, *E. D.* 1873 E, p. 625.

1877 P. (Amphimys, type *A. oxysternum*.)

1882 E, p. 145. (Agomphus, Amphimys.)

- Cope, E. D. 1884 O, p. 113. (*Agomphus*, *Amphimys*.)
 1891 F, p. 645.
 Lydekker, R. 1889 G, p. 129.
 Nicholson and Lydekker 1889 A, p. 1106.
 Zittel, K. A. 1890 A, p. 536. (*Agomphus*, *Amphimys*.)

***Agomphus firmus* (Leidy).**

- Leidy, J.* 1856 P, p. 303. (*Emys*.)
 Cope, E. D. 1868 K, p. 235. (*Adocus*.)
 1869 B, p. 734. (*Adocus*.)
 1869 M, pp. 125, 126. (*Emys*.)
 1870 G, p. 295. (*Adocus*.)
 1871 G, p. 46.
 1875 E, p. 262.
Leidy, J. 1865 A, pp. 106, 119, pl. xix, fig. 2. (*Emys*.)
 Maack, G. A. 1869 A, p. 277. (*Emys*.)
 Cretaceous (Green-sand No. 5); New Jersey.

***Agomphus oxysternum* Cope.**

- Cope, E. D.* 1877 P. (*Amphimys*.)

- Baur, G. 1888 B, p. 595.
 1891 B, p. 429.

- Cope, E. D.* 1878 EE. (*Amphimys*.)
 Tertiary?; Georgia.

***Agomphus petrosus* Cope.**

- Cope, E. D.* 1868 K, p. 236. (*Adocus*.)
 1869 B, p. 734. (*Adocus*.)
 1869 M, pp. 125, 126. (*Emys*.)
 1870 G, p. 295. (*Adocus*.)
 1871 G, p. 46.
 1873 E, p. 625.
 1875 E, p. 262.
 Cretaceous (Green-sand No. 5); New Jersey.

***Agomphus turgidus* Cope.**

- Cope, E. D.* 1869 M, pp. 125, 127. (*Emys*.)
 1871 G, p. 46.
 1875 E, p. 262.
 Cretaceous (Green-sand No. 5); New Jersey.

BASILEMYS gen. nov. Type *Compsemys variolosus* Cope.

***Basilemys imbricarius* (Cope).**

- Cope, E. D.* 1876 H, p. 257. (*Compsemys*.)
 1877 G, p. 573. (*Compsemys*.)
 Cretaceous (Laramie); Montana.

***Basilemys variolosus* (Cope).**

- Cope, E. D.* 1876 H, p. 257. (*Compsemys*.)

- Cope, E. D.* 1875 E, pp. 91, 261. (*C. ogmius*.)
 1875 I. (*C. ogmius*.)
 1875 W, p. 336. (*C. ogmius*.)
 1877 G, p. 573. (*C. variolosus*.)
 Cretaceous (Laramie); Saskatchewan, Montana.

ZYGORAMMA Cope. Type *Z. striatula* Cope.

- Cope, E. D.* 1870 N, p. 550.
 1871 G, p. 44.

- Zittel, K. A. 1890 A, p. 536.

***Zygoramma microglypha* Cope.**

- Cope, E. D.* 1871 G, p. 44.
 1875 E, p. 263.
 Cretaceous (Green-sand No. 5); New Jersey.

***Zygoramma striatula* Cope.**

- Cope, E. D.* 1870 N, p. 550.
 1871 G, p. 44.
 1875 E, p. 263.
 Cretaceous (Green-sand No. 5); New Jersey.

BAPTEMYS Leidy. Type *B. wyomingensis* Leidy.

- Leidy, J.* 1870 E, p. 5.
 Baur, G. 1891 B, p. 429.
Cope, E. D. 1869 M (1870), pp. 233 and ii.
 1871 Q, p. 563.
Leidy, J. 1871 C, p. 367.
 Lydekker, R. 1889 G, pp. 129, 143.
 Nicholson and Lydekker 1889 A, p. 1106.
 Zittel, K. A. 1890 A, p. 536.

***Baptemys costilatus* (Cope).**

- Cope, E. D.* 1875 C, p. 36. (*Dermatemys*?)
 1875 F, p. 96. (*Dermatemys*.)
 1875 U, p. 1016. (*Dermatemys*.)
 1877 K, p. 52, pl. xxiv, figs. 17-31. (*Dermatemys*.)
 1884 O, p. 142. (*Dermatemys*.)
King, C. 1878 A, p. 377. (*Dermatemys*.)
 Eocene (Wasatch); N. Mexico.

***Baptemys wyomingensis* Leidy.**

- Leidy, J.* 1870 E, p. 5.
 Baur, G. 1891 B, p. 429.
Cope, E. D. 1869 M (1870), p. 233 (*Adocus wyomingensis*); p. ii (*Baptemys*.)
 1870 G, p. 297. (*Adocus wyomingensis*.)
 1873 E, p. 624. (*Dermatemys*.)
 1882 J, p. 991, fig. 9. (*Dermatemys*.)
 1884 O, p. 142. (*Dermatemys wyomingensis*.)
King, C. 1878 A, p. 404.
Leidy, J. 1871 C, p. 367.
 1872 B, p. 367.
 1873 B, pp. 157, 340, pl. xii, pl. xv, fig. 6.
 Eocene (Bridger); Wyoming.

***Baptemys* sp. indet.**

- Cope, E. D.* 1881 D, p. 184. (*Dermatemys*.)
 Eocene (Wind River); Wyoming.

HOMOROPHUS Cope. Type *H. insuetus* Cope.

- Cope, E. D. 1870 N, p. 551.
 1882 E, p. 145. (Homorhophus.)
 1884 O, p. 113. (Homorhophus.)
 Nicholson and Lydekker 1889 A, p. 1106.
 Zittel, K. A. 1890 A, p. 536.

Homorophus insuetus Cope.

- Cope, E. D. 1870 N, p. 552.
 1871 G, p. 44.
 1875 E, p. 263.
 Cretaceous (Green-sand No. 5); New Jersey.

CHELYDRIDÆ.

- Swainson*, 1839, Nat. Hist. and Classif. Fishes, etc.,
 p. 116. (Chelidridæ.)
Agassiz, L. 1857 B, pp. 341, 409. (Chelydroidæ.)
Baur, G. 1889 A, p. 186.
 1889 H.
 1891 B, p. 428.
 1891 C, p. 346.
Bienz, A. 1895 A.
Boulenger, G. A. 1889 A, p. 19.
Cope, E. D. 1871 C, p. 130. (Chelydrinæ.)
 1872 B. (Chelydrinæ.)
 1872 D.
 1882 E, p. 143.
 1884 O, pp. 111, 112.

- Dollo*, L. 1888 A.
Günther, A. 1888 A, p. 457.
Hay, O. P. 1896 A.
Lydekker, R. 1889 G, p. 133.
Maack, G. A. 1869 A, p. 230.
Meyer, H. 1852 B.
 1856 A.
Nicholson and Lydekker 1889 A, p. 1104.
Rütimeyer, L. 1874 A, p. 16.
Siebenrock, F. 1897 A.
Steinmann and Döderlein 1890 A, p. 635.
Zittel, K. A. 1890 A, p. 532.

CHELYDRA Schweigger. Type *Testudo serpentina* Linn.

- Schweigger*, 1814, Prod., p. 23.
Agassiz, L. 1857 B, p. 416.
Baur, G. 1886 G, p. 740.
 1889 B, p. 41.
 1889 D.
 1891 H, p. 58.
 1892 D, p. 207.
Bienz, A. 1895 A.
Boulenger, G. A. 1889 A, p. 20.
Cope, E. D. 1869 M, p. 131.
 1872 D.
 1884 O, p. 112.
 1888 CC, p. 305.
Dollo, L. 1888 A.
Gray, J. E. 1869 B, p. 180.
Hay, O. P. 1896 A.
 1898 F, p. 937.
Hoffmann, C. K. 1890 A.
Lang and Rütimeyer, 1867 A.
Lydekker, R. 1889 G, p. 134.
Meyer, H. 1845 A, p. 12.
 1852 B.
 1856 A.
 1865 C.

- Nicholson and Lydekker* 1889 A, p. 1104.
Pictet, F. J. 1853 A, p. 453.
Rütimeyer, L. 1874 A, p. 17.
Siebenrock, F. 1898 A, p. 425.
Strauch, A. 1890 A, p. 22.
Wieland, G. R. 1900 B, p. 416, fig. 5.
Winckler, T. C. 1869 A, p. 81.
Zittel, K. A. 1890 A, p. 535.

Chelydra crassa Cope.

- Cope, E. D. 1888 CC, p. 306.
 1882 C, p. 461. (Dermatemys sp.; no description.)
 1888 C. (No description.)
 Eocene (Puerco); New Mexico.

Chelydra serpentina (Linn.).

- Linnaeus*, C., 1858, Syst. Nat., ed. x, p. 199.
Agassiz, L. 1857, p. 417, pl.
Boulenger, G. A. 1889 A, p. 20, figs. 3, 4.
Cope, E. D. 1869 M, p. 124.
 Recent: Pleistocene; Maryland.

ACHERONTEMYS Hay. Type *A. heckmani* Hay.

- Hay*, O. P. 1899 D, p. 23.

Acherontemys heckmani Hay.

- Hay*, O. P. 1899 D, p. 23, pl. vi.
 Miocene (Roslyn sandstone); Washington.

ANOSTEIRIDÆ.

- Baur*, G. 1889 H. (Staurotypidæ or Cinosternidæ,
 in part.)
 1889 I, p. 276. (Pseudotrionychidæ.)

- Günther*, A. 1888 A, p. 457. (Pseudotrionychidæ,
 in part.)
Lydekker, R. 1889 G, p. 143. (Anosteirinae.)

ANOSTEIRA Leidy. Type *A. ornata* Leidy.

- Leidy, J. 1871 E, p. 102.
 Baur, G. 1889 H, p. 58.
 1889 I, p. 273.
 Cope, E. D. 1873 E, pp. 620, 649. (Anostira.)
 1873 M, p. 278. (Anostira.)
 1882 E, p. 145. (Anostira.)
 1882 J, p. 990. (Anostira.)
 1884 O, pp. 112, 127. (Anostira.)
 Dollo, L. 1886 A, p. 95. (Anostira.)
 Günther, A. 1888 A, p. 457. (Anostira.)
 Leidy, J. 1872 B, p. 270.
 1873 B, p. 174.
 Lydekker, R. 1889 G, p. 143.
 Nicholson and Lydekker 1889 A, p. 1105.
 Zittel, K. A. 1890 A, p. 534.

Anosteira ornata Leidy.

Leidy, J. 1871 E, p. 102.

- Cope, E. D. 1873 E, p. 621.
 1882 J, p. 989, fig. 7.
 1884 O, p. 128.
 Dollo, L. 1886 A, pl. ii, figs. 7, 8.
 King, C. 1878 A, p. 404.
 Leidy, J. 1872 B, p. 370.
 1873 B, pp. 174, 341, pl. xvi, figs. 1-6.
 Eocene (Bridger); Wyoming.

Anosteira radulina Cope.

- Cope, E. D. 1872 V, p. 555.
 Baur, G. 1889 I, p. 273. (A. radulata.)
 Cope, E. D. 1873 E, p. 620.
 1884 O, p. 128, pl. xviii, figs. 18, 19.
 Eocene (Bridger); Wyoming.

EMYDIDÆ.

- Gray, J. E. 1825, Ann. Philos. (2), x.
 Agassiz, L. 1857 B, pp. 351, 430. (Emydoidæ.)
 Baur, G. 1891 A, p. 348.
 1892 A, p. 159.
 1893 B, p. 675.
 Boulenger, G. A. 1889 A, p. 48. (<Testudinidæ.)
 Cope, E. D. 1872 D.
 1882 E, pp. 143, 145. (Emydidæ, Cistudinidæ.)
 1884 O, pp. 111, 113. (Emydidæ, Cistudinidæ.)
 1899 A, p. 196. (Terrapenidæ.)
 Dollo, L. 1886 A. (Emydidæ, Cistudinidæ.)

- Gray, J. E. 1869 B, p. 175. (>Cistudinidæ.)
 Günther, A. 1888 A, p. 457. (<Testudinidæ.)
 Lydekker, R. 1889 G, p. 71. (<Testudinidæ.)
 Mehnert, E. 1890 A.
 Nicholson and Lydekker 1889 A, p. 1107. (<Testudinidæ.)
 Pictet, F. J. 1853 A, p. 446. (Emydides.)
 Rosenberg, E. 1891 A.
 Rüttimeyer, L. 1874 A, pp. 18, 53, 82.
 Steinmann and Döderlein 1890 A, p. 637.
 Vaillant, L. 1891 A.
 Zittel, K. A. 1890 A, p. 637.

EMYS Duméril. Type *Testudo orbicularis* Linn.

- Duméril, 1806, Zool. Anal., p. 76.
 Agassiz, L. 1857 B, p. 441.
 Baur, G. 1892 A, p. 158.
 1892 C, p. 44 (Terrapene); p. 245 (Emydes).
 1892 D, p. 208.
 Boulenger, G. A. 1889 A, p. 111.
 Cope, E. D. 1872 M, p. 463. (Palæotheca, type *P. polycypha*.)
 1872 O, p. 474. (Notomorpha, type *N. gravis*.)
 1873 E, p. 625.
 1877 K, p. 53.
 1882 J, p. 992.
 1884 O, pp. 113, 129 (Emys); p. 142 (Notomorpha).
 Hoffmann, C. K. 1890 A.
 Leidy, J. 1871 C, p. 366.
 Lydekker, R. 1889 G, p. 102.
 Mehnert, E. 1890 A.
 Owen, R. 1842 A, p. 160.
 1849 B.
 Pictet, F. J. 1853 A, p. 447.
 Pictet and Humbert 1856 A.
 Pictet and Jaccard 1860 A, p. 15.
 Rosenberg, E. 1891 A.
 Strauch, A. 1890 A, p. 14.
 Vaillant, L. 1891 A.

- Winckler, T. C. 1869 A.
 Zittel, K. A. 1890 A, p. 538.

It is not probable that any of the species here included under *Emys* really belongs to the genus as it is restricted by modern writers. The species are more closely related to *Chrysemys* and *Clemmys*.

Emys cibollensis Cope.

- Cope, E. D. 1877 K, p. 57, pl. xxvii, fig. 4; pl. xxviii, figs. 3-6.
 1875 C, p. 36. (E. stevensoniana.)
 1875 F, p. 96. (E. stevensonianus.)
 1884 O, p. 131. (Syn.? of E. euthneta.)
 Eocene (Wasatch); New Mexico.

Emys euglypha Leidy.

- Leidy, J. 1889 B, p. 97.
 1889 E, p. 27, pl. iv, fig. 1.
 1892 A.
 Pliocene (Peace Creek beds); Florida.

Emys euthneta Cope.

- Cope, E. D. 1873 E, p. 628.
 1884 O, pp. 129, 133, pl. xviii, figs. 34-42.
 King, C. 1878 A, p. 376.
 Eocene (Wasatch); Wyoming.

Emys haydeni Leidy.*Leidy, J.* 1870 S, p. 123.Cope, *E. D.* 1884 O, pp. 130, 137.Leidy, *J.* 1871 C, p. 366.1872 B, p. 367. (*E. wyomingensis*, in part.)1873 B, pp. 145, 340, pl. ix, fig. 6. (*E. wyomingensis*, in part.)

Eocene (Bridger); Wyoming.

Emys latilabiata Cope.Cope, *E. D.* 1872 E, p. 471.

1873 E, pp. 625, 626.

1884 O, pp. 130, 138.

Eocene (Bridger); Wyoming.

Emys lativertebralis Cope.Cope, *E. D.* 1877 K, p. 53, pl. xxvii, figs. 1-3; pl. xxviii, figs. 1, 2.1875 C, p. 36. (*E. latilabiatus*.)1875 F, p. 96. (*E. latilabiatus*.)

1882 J, p. 991, fig. 10.

1884 O, p. 129.

Eocene (Wasatch); New Mexico.

Emys megalax Cope.Cope, *E. D.* 1873 E, p. 628.1873 E, p. 629. (*E. pachylomus*.)

1884 O, p. 132, pl. xviii, figs. 26-33.

King, *C.* 1878 A, p. 376. (*E. megalax*, *E. pachylomus*.)

Eocene (Wasatch); Wyoming.

Emys petrolei Leidy.*Leidy, J.* 1868 A, p. 176.Cope, *E. D.* 1869 M, p. 128.Leidy, *J.* 1873 B, pp. 260, 340, pl. ix, fig. 7.

Quaternary; Texas.

Emys polycypha Cope.Cope, *E. D.* 1872 M, p. 463. (*Palæotheca*.)

1873 E, pp. 625, 630.

1884 O, pp. 129, 131, pl. xviii, figs. 20-22.

Eocene (Bridger); Wyoming.

Emys septaria Cope.Cope, *E. D.* 1873 E, p. 625.

NOTOMORPHA Cope.

Cope, *E. D.* 1872 O, p. 474.

1884 O, p. 142.

Günther, *A.* 1888 A, p. 457.**Notomorpha gravis** Cope.Cope, *E. D.* 1872 O, p. 476.

EUPACHEMYS Leidy.

Leidy, J. 1877 A, p. 232.**Eupachemys obtusa** Leidy.*Leidy, J.* 1877 A, p. 232, pl. xxxiv, figs. 4, 5.

HYBEMYS Leidy.

Leidy, J. 1871 E, p. 103.

1873 B, p. 174.

Hybemys arenarius Leidy.*Leidy, J.* 1871 E, p. 103.Cope, *E. D.* 1882 J, p. 992.

1884 O, pp. 130, 139, pl. xvii, figs. 9-13.

Leidy, *J.* 1870 E, p. 50. (*E. stevensonianus*, in part.)1871 B, p. 372. (*E. stevensonianus*, in part.)1871 C, p. 366. (*E. stevensonianus*, in part.)1873 B, pp. 140, 340, pl. ix, figs. 2, 3. (*E. wyomingensis*, in part.)

Eocene (Bridger); Wyoming.

Emys shaughnessiana Cope.Cope, *E. D.* 1884 O, pp. 130, 135, pl. xxiii, figs. 3-8.

1882 J, p. 992. (Not adequately defined.)

Eocene (Bridger); Wyoming.

Emys terrestris Cope.Cope, *E. D.* 1872 M, p. 463. (*Palæotheca*.)

1873 E, p. 629.

1884 O, pp. 129, 130, 131, pl. xviii, figs. 23-25.

Eocene (Bridger); Wyoming.

Emys testudinea Cope.Cope, *E. D.* 1872 O, p. 475. (*Notomorpha*.)

1873 E, p. 627.

1877 K, p. 58.

1884 O, pp. 129, 134, pl. xxiii, figs. 12, 13.

Eocene (Green River); Wyoming.

Emys wyomingensis Leidy.*Leidy, J.* 1869 B, p. 66.Cope, *E. D.* 1873 E, pp. 625, 626.1877 K, p. 53. (*E. wyomingensis*.)1884 O, p. 135, pl. xxiii, figs. 9-11. (*E. wyomingensis*.)Leidy *J.* 1870 E, p. 5. (*E. stevensonianus*, in part.)1870 S, p. 123. (*E. jeanesi*.)1871 B, p. 372. (*E. jeanesianus*; *E. stevensonianus*, in part.)1871 C, p. 366. (*E. stevensoni*, in part; *E. jeanesi*.)

1872 B, p. 367.

1873 B, pp. 140, 340, in part; pl. ix, figs. 4, 5; pl. x, figs. 1, 2.

Osborn, Scott, and Speir 1878 A, p. 95.

Eocene (Bridger); Wyoming.

Type *N. gravis* Cope.Cope, *E. D.* 1872 O, p. 477. (*N. garmanii*.)1873 E, pp. 625, 626. (*Emys*.)

1884 O, p. 143, pl. xxiii, figs. 14-16.

Eocene (Wasatch); Wyoming.

Type *E. obtusa* Leidy.Leidy, *J.* 1889 E, p. 29. ("E. rugosus".)This species may be identical with *Testudo crassiscutata*.

Phosphate beds; South Carolina.

Type *H. arenarius* Leidy.King, *C.* 1878 A, p. 404.Leidy, *J.* 1872 B, p. 369.

1873 B, pp. 174, 340, pl. xv, fig. 9.

Eocene (Bridger); Wyoming.

TRACHEMYS Agassiz. Type *T. scabra* = *Testudo scripta* Schoepff.

Agassiz, L. 1857 B, p. 434.

Baur, G. 1892 D, p. 208.

Cope, E. D. 1878 C, p. 228. (Pseudemys.)
1878 H, p. 395. (Pseudemys.)

Trachemys bisornata (Cope).

Cope, E. D. 1878 C, p. 228. (Pseudemys.)
Pliocene; Texas.

Trachemys hilli (Cope).

Cope, E. D. 1878 H, p. 395. (Pseudemys.)
Miocene (Loup Fork); Kansas.

CLEMMYS Ritgen. Type *Testudo punctata* Schoepff = *T. guttata* Schneider.

Ritgen, F. A., 1828, Nova Acta Acad. Leop.-Car.,
xiv, i, p. 272.

Agassiz, L. 1857 B, p. 442 (Nanemys); p. 443 (Cale-
mys, Glyptemys); p. 444 (Actemys).

Baur, G. 1892 C, p. 44.

Boulenger, G. A. 1889 A, p. 100.

Goette, A. 1899 A.

For additional synonymy and literature of
this genus see Boulenger, as cited.

Clemmys insculpta Le C.

Le Conte, J., 1830, Ann. Lyc. New York, iii, p. 112.
(Testudo.)

Cope, E. D. 1899 A, p. 194.

Boulenger, G. A. 1889 A, p. 107.

Recent; Eastern U. S.: Pleistocene (Port
Kennedy); Pennsylvania.

Clemmys percassa Cope.

Cope, E. D. 1899 A, p. 194, pl. xviii, figs. 1-1g.

Pleistocene (Port Kennedy); Pennsylvania.

TERRAPENE¹ Merrem. Type *Testudo carolina* Linn.

Merrem, B. 1820, Tent. Syst. Amphib., p. 27.

Agassiz, L. 1857 B, p. 444. (Cistudo.)

Baur, G. 1892 A, p. 158. (Cistudo.)

1892 C, p. 44 (Cistudo); p. 245 (Terrapene).

Boulenger, G. A. 1889 A, p. 114. (Cistudo.)

Cope, E. D. 1895 H, p. 757. (Terrapene; Toxaspis,
type *T. major*.)

1899 A, p. 196. (Toxaspis.)

Fleming, 1822, Phil. Zool., ii, p. 270. (Cistuda.)

Pictet and Humbert 1856 A, p. 35. (Cistudo.)

Zittel, K. A. 1890 A, p. 537. (Cistudo.)

Terrapene anguillulata (Cope).

Cope, E. D. 1899 A, p. 196, pl. xix, fig. 1. (Tox-
aspis.)

Pleistocene (Port Kennedy); Pennsylvania.

Terrapene eurypygia (Cope).

Cope, E. D. 1869 M, p. 124. (Cistudo.)

Pleistocene; Maryland.

Terrapene marnochii (Cope).

Cope, E. D. 1878 C, p. 229. (Cistudo.)

1885 S. (Cistudo.)

1889 F. (Cistudo.)

Pleistocene (Equus beds); Texas.

TESTUDINIDÆ.

Gray, J. E., 1825, Ann. Phil. (2), x.

Agassiz, L. 1857 B, pp. 356, 446. (Testudinina.)

Baur, G. 1889 H.

1889 J.

1892 A, p. 159.

1893 B, p. 677.

Boulenger, G. A. 1889 A, p. 48. (In part.)

Burckhardt, K. 1895 A.

Cope, E. D. 1882 E, p. 143.

1884 O, pp. 111, 113.

Dollo, L. 1887 A.

Duméril and Bibron, 1834, Erp. Gén., i, p. 352;
ii, pp. 1-170. (Chersites.)

Gray, J. E. 1869 B, p. 166.

1873 C, p. 722. (Testudinata.)

Günther, A. 1888 A, p. 457.

Lydekker, R. 1889 G, p. 71. (In part.)

Nicholson and Lydekker 1889 A, p. 1107. (In part.)

Siebenrock, F. 1897 A.

Stannius, J. 1856 A. (Testudinea.)

Steinmann and Döderlein 1890 A, p. 638.

Wieland, G. R. 1900 B, p. 413.

Zittel, K. A. 1890 A, p. 539. (Chersidæ.)

¹*Terrapene clausa* has been reported by Dr. Leidy (1889 H, p. 6) from a cave in Pennsylvania. The species accompanying the remains, with few exceptions, yet live in the vicinity.

HADRIANUS Cope. Type *H. octonarius* Cope.

- Cope, E. D. 1872 N, p. 468.
 Baur, G. 1896 B, p. 568.
 Cope, E. D. 1873 E, p. 630.
 1877 K, p. 58.
 1882 E, p. 146.
 1882 J, p. 992.
 1884 O, pp. 113, 140.
 Hay, O. P. 1899 D, p. 22.
 Leidy, J. 1873 B, p. 137.
 Lydekker, R. 1889 G, p. 72.
 Zittel, K. A. 1890 A, p. 540. (Syn. of *Testudo*.)

Hadrianus allabaiatus Cope.

- Cope, E. D. 1872 E, p. 471.
 1873 E, p. 630.
 1884 O, p. 140, pl. xv, figs. 13-15.
 Osborn, Scott, and Speir 1878 A, p. 94.
 Eocene (Bridger); Wyoming.

Hadrianus corsoni (Leidy).

- Leidy, J. 1871 H. (*Testudo*.)
 Cope, E. D. 1872 M, p. 463. (*Testudo hadrianus*.)
 1872 N, p. 468. (*Hadrianus quadratus*.)
 1873 E, p. 631.
 1875 C, p. 36.
 1875 F, p. 96.
 1877 K, p. 58, pl. xxiv, fig. 36.

- Cope, E. D. 1882 J, p. 992.
 1884 O, p. 141.
 Leidy, J. 1871 B, p. 372. (*Emys carteri*.)
 1871 K, p. 228. (*E. carteri*.)
 1872 B, p. 366 (*Testudo*); p. 367 (*E. carteri*.)
 1872 I, p. 268. (*Testudo*.)
 1873 B, pp. 132, 339, pl. xi, figs. 1, 2; pl. xv, fig. 7; pl. xxix, figs. 2-4; pl. xxx, figs. 1-4. (*Testudo*; on pl. xv, *Emys carteri*.)
 Maack, G. A. 1869 A, p. 278. (*Emys carteri*.)
 Eocene (Bridger); Wyoming: (Wasatch); New Mexico.

Hadrianus octonarius Cope.

- Cope, E. D. 1872 N, p. 468.
 1873 E, p. 630.
 1882 J, p. 992, figs. 11-13.
 1884 O, p. 140, pl. xx.
 Hay, O. P. 1899 D, p. 23.
 Osborn, Scott, and Speir 1878 A, p. 95.
 Eocene (Bridger); Wyoming.

Hadrianus schucherti Hay.

- Hay, O. P. 1899 D, p. 22, pls. iv, v.
 Schuchert, C. 1900 A, p. 328.
 Eocene (Jackson); Alabama.

STYLEMYS Leidy. Type *S. nebrascensis* Leidy.

- Leidy, J. 1851 B, p. 172.
 Agassiz, L. 1857 B, p. 448. (No name.)
 Cope, E. D. 1869 M, p. 123.
 1875 F, p. 74.
 1882 E, p. 145.
 1884 O, pp. 113, 769.
 Leidy, J. 1871 C, p. 366.
 1873 B, p. 223.
 Lydekker, R. 1889 G, p. 93.
 Nicholson and Lydekker 1889 A, p. 1109.
 Zittel, K. A. 1890 A, p. 540. (Syn. of *Testudo*.)

Stylemys nebrascensis Leidy.

- Leidy, J. 1851 B, p. 172.
 Cope, E. D. 1869 M, p. 124, pl. vii, figs. 10-12. (*S. culbertsonii*, *S. nebrascensis*.)
 1874 B, p. 511.
 1884 O, p. 769.
 1891 A, p. 5.
 Haberlandt, G. 1876 A. (*Testudo culbertsoni*.)
 Hayden, F. V. 1858 B, p. 158. (*Testudo*.)
 Leidy, J. 1851 C, p. 173. (*Emys hemispherica*, *Testudo lata*.)
 1851 G, p. 327. (*E. oweni*.)
 1852 D, p. 34. (*E. culbertsonii*.)
 1852 E, p. 59. (*T. hemispherica*, *T. nebrascensis*, *T. oweni*, *T. culbertsonii*.)
 1852 J, p. 567, pl. xii A, figs. 1, 2 (*T. nebrascensis*); p. 568, pl. xii A, figs. 3, 4 (*T. oweni*); p. 569, pl. xii (*T. culbertsonii*); p. 570, pl. xii B, figs. 1, 2 (*T. hemispherica*); p. 572 (*T. lata*).

- Leidy, J. 1852 L, p. 65. (*T. lata*, *E. hemispherica*, *E. nebrascensis*.)
 1854 A, pp. 103, 115, pl. xxi (*T. nebrascensis*); pp. 105, 115, pl. xx; pl. xxiv, fig. 3 (*T. hemispherica*); pp. 106, 115, pl. xxi, pl. xxiv, fig. 4 (*T. oweni*); pp. 108, 115, pl. xxii, pl. xxiv, fig. 2 (*T. culbertsonii*); pp. 110, 115, pl. xxiii, pl. xxiv, fig. 1 (*T. lata*.)
 1869 A, p. 26. (*Testudo*, or *Stylemys*.)
 1871 C, p. 366.
 1873 B, pp. 224, 339, pl. xix, figs. 7, 9, 10. (*Testudo*.)
 Lydekker, R. 1889 G, p. 94.
 Maack, G. A. 1869 A, 245 (*T. nebrascensis*, *hemispherica*, *oweni*); p. 246 (*T. lata*, *culbertsonii*.)
 Marsh, O. C. 1870 D. (*Testudo*.)
 Winckler, T. C. 1869 A, p. 145, pls. xxxi-xxxiii. (*T. nebrascensis*, *culbertsoni*, *lata*, *oweni*.)
 Zittel, K. A. 1890 A, p. 540, fig. 501. (*Testudo*.)
 Oligocene (White River); South Dakota, Colorado.

Stylemys niobrarensis Leidy.

- Leidy, J. 1858 E, p. 29. [*Testudo* (*Stylemys*.)]
 Cope, E. D. 1869 M, p. 124.
 1874 B, p. 531.
 Hayden, F. V. 1858 B, p. 158. (*Testudo*.)
 Leidy, J. 1869 A, p. 26. (*Testudo*, or *Stylemys*.)
 1871 C, p. 366.
 1873 B, pp. 225, 340, pl. iii, figs. 4-6; pl. xix, figs. 6-8. (*Testudo*.)

Maack, G. A. 1869 A, p. 222. (Testudo.)
Miocene; South Dakota.

Stylemys oregonensis Leidy.

Leidy, J. 1871 M, p. 248.

TESTUDO Linn. Type *T. græca* Linn.

Linnaeus, C., Syst. Nat., ed. x, 1858, p. 197. (In part.)

Agassiz, L. 1857 B, p. 446. (Testudo, Xerobates.)

Baur, G. 1889 J.
1892 A.

Bienz, A. 1895 A, p. 99.

Boulenger, G. A. 1889 A, p. 149.

Cope, E. D. 1874 B, p. 511.

1878 H, p. 393. (Testudo, Xerobates.)

1882 E, p. 146.

1884 O, pp. 113, 762. (Testudo, Xerobates.)

1886 N. (Caryoderma, type *C. snovianum*.)

1889 P, p. 662. (Caryoderma.)

Flower and Lydekker 1891 A, p. 204. (Caryoderma.)

Fürbringer, M. 1900 A, p. 320.

Gray, J. E. 1869 B, p. 167.

1873 C, p. 723. (Xerobates.)

Günther, A. 1877 A.

Hoffmann, C. K. 1890 A.

Leidy, J. 1852 J, p. 566.

1854 A, pp. 101; 115.

Lydekker, R. 1889 G, p. 71.

Pictet, F. J. 1853 A, p. 443.

Pictet and Humbert 1856 A, p. 17.

Siebenrock, F. 1897 A.

1898 A.

Strauch, A. 1890 A, p. 11.

Wieland, G. R. 1900 B, p. 415, figs. 1-4.

Zittel, K. A. 1890 A, p. 540. (Testudo.)

1893 B, p. 147. (Caryoderma.)

Testudo amphithorax Cope.

Cope, E. D. 1873 S, p. 6.

1873 C C, p. 19.

1874 B, p. 511.

1884 O, pp. 762, 767, pl. lxi, fig. 4.

Oligocene (White River); Colorado.

Testudo brontops Marsh.

Marsh, O. C. 1890 E, p. 179, pl. viii.

Dana, J. D. 1896 A, p. 901, fig. 1516.

Marsh, O. C. 1897 C, pp. 523, 527, figs. 95, 96.

Oligocene (White River); South Dakota, Colorado.

Testudo crassiscutata Leidy.

Leidy, J. 1889 E, p. 31, pl. vi, figs. 4-7.

1892 A.

Pliocene; Florida.

This species may be identical with *Eupachemys obtusa*.

Testudo cultrata Cope.

Cope, E. D. 1873 S, p. 6.

1873 C C, p. 19.

1874 B, p. 511.

1884 O, pp. 762, 763, pl. lxiii, figs. 1-3.

1892 E, p. 256.

Oligocene (White River); Colorado.

Cope, E. D. 1879 B, p. 55.

1884 O, p. 770. (Syn. of *S. nebrascensis*.)

Leidy, J. 1873 B, pp. 226, 340, pl. xv, fig. 10. (Testudo.)

Miocene (John Day); Oregon.

Testudo cyclopygia (Cope).

Cope, E. D. 1878 H, p. 394. (Xerobates.)

Hay, O. P. 1899 G, p. 349.

Miocene (Loup Fork); Kansas.

Testudo gilbertii Hay.

Hay, O. P. 1899 G, p. 349.

Gilbert, J. Z. 1898 A, p. 143, figs. 1-4. (Xerobates undata.)

Miocene (Loup Fork); Kansas.

Testudo hexagonata Cope.

Cope, E. D. 1893 A, p. 77, pl. xxii, fig. 2.

Pleistocene (Equus beds); Texas.

Testudo klettiana Cope.

Cope, E. D. 1875 F, p. 75.

1877 K, p. 285, pl. lxxvii, fig. 3.

Miocene (Loup Fork); New Mexico.

Testudo laticaudata Cope.

Cope, E. D. 1893 A, p. 75, pl. xxii, fig. 1.

Pleistocene (Equus beds); Texas.

Testudo laticuneia Cope.

Cope, E. D. 1873 S, p. 6.

1873 CC, p. 19.

1874 B, p. 511.

1884 O, pp. 762, 765, pl. lxi, fig. 1.

Oligocene (White River); Colorado.

Testudo ligonia Cope.

Cope, E. D. 1873 S, p. 6.

1873 CC, p. 19.

1874 B, p. 511.

1884 O, pp. 762, 766, pl. lxi, figs. 2, 3.

Oligocene (White River); Colorado.

Testudo orthopygia (Cope).

Cope, E. D. 1878 H, p. 393. (Xerobates.)

Hay, O. P. 1899 G, p. 349.

Miocene (Loup Fork); Kansas.

Testudo pertenuis Cope.

Cope, E. D. 1892 G, p. 226.

1893 A, pp. 47, 49, fig. 1.

Pliocene (Blanco); Texas.

Testudo quadrata.

Cope, E. D. 1884 O, pp. 762, 764, pl. lxi, fig. 5.

Oligocene (White River); Colorado.

Testudo snoviana (Cope).

Cope, E. D. 1886 N. (Caryoderma.)

1889 P, p. 662, pl. xxxii. (Caryoderma.)

Trouessart, E. L. 1898 A, p. 1136. (Caryoderma.)

Williston, S. W. 1898 G, p. 132. (Testudo undata?)

Miocene (Loup Fork); Kansas.

Testudo turgida Cope.

- Cope, E. D.* 1892 J, p. 127.
 1892 E, p. 255.
 1892 P.
 1893 A, p. 47.
 Pliocene (Blanco); Texas.

Testudo undata Cope.

- Cope, E. D.* 1875 F, p. 74.

- Cope, E. D. 1877 K, p. 283, pl. lxxvii, figs. 1, 2.
 Hay, O. P. 1899 G, p. 349.
 Miocene (Loup Fork); New Mexico.

Testudo sp. indet.

- Leidy, J. 1860 B, p. 122, pl. xxviii, figs. 1-4.
 Pleistocene; South Carolina.

Suborder TRIONYCHIA.

Unless otherwise indicated, the following authors refer to this group under the name *Trionyochoidea*.

- Baur, G. 1888 B, p. 736.
 1889 C, p. 240. (Chilotæ.)
 1890 D, p. 536. (Trionychia, Chilotæ.)
 1891 B, pp. 418, 420. (Trionychia.)
 Boulenger, G. A. 1889 A, pp. 5, 237.
 Cope, E. D. 1891 N, p. 39.
 1898 B, p. 62.
 Duméril and Bibron, 1834, *Érp. Gén.*, i, p. 353; ii, p. 461. (Potamites.)
 Gadow, H. 1898 A, p. 91. (Trionyochoidea.)

- Gray, J. E. 1872 A.
 Günther, A. 1888 A, p. 457.
 Haeckel, E. 1895 A, p. 326. (Diacostalia.)
 Lydekker, R. 1889 G, p. 3.
 Nicholson and Lydekker 1889 A, p. 1116.
 Pictet, F. J. 1853 A, p. 455. (Trionychides.)
 Rüttimeyer, L. 1874 A, pp. 13, 51.
 Seeley, H. G. 1880 B, p. 412. (Peltochelyidæ.)
 Siebenrock, F. 1897 A. (Trionyochoidea.)
 Stannius, H. 1856 A. (Trionyochoidea.)
 Steinmann and Döderlein 1890 A, p. 634.
 Vaillant, L. 1894 A. (Mecraspedota.)
 Zittel, K. A. 1890 A, p. 513. (Trionychia.)

PLASTOMENIDÆ nom. nov.

Trionychia without fontanelles in the plastron behind the anterior border of the hyoplastron.

PLASTOMENUS Cope. Type *P. thomasi* Cope.

- Cope, E. D.* 1873 M.
 1873 E, p. 617.
 1875 C, p. 35.
 1875 E, p. 92.
 1875 I.
 1875 W, p. 336.
 1877 K, p. 47.
 1882 E, p. 144.
 1884 O, pp. 112, 122.
 Dollo, L. 1886 A, p. 94.
 Lydekker, R. 1889 G, p. 7. (Syn. of Trionyx.)
 Nicholson and Lydekker 1889 A, p. 1118.
 Zittel, K. A. 1890 A, p. 517.

Plastomenus communis Cope.

- Cope, E. D.* 1875 C, p. 35.
 1875 F, p. 96.
 1877 K, pp. 48, 50, pl. xxv, figs. 1-6. (Except "var. ii," p. 50, which belongs to *P. molopinus*.)
 1882 C, p. 461.
 1884 O, pp. 123, 126.
 1888 C C, p. 301. (*P. communis*?)
 King C. 1878 A, p. 377.
 Eocene (Puerco? and Wasatch); New Mexico.

Plastomenus corrugatus Cope.

- Cope, E. D.* 1875 C, p. 35.
 1875 F, p. 96.
 1875 W, p. 337.
 1877 K, p. 48, pl. xxv, figs. 20-26.
 1884 O, p. 123.
 King, C. 1878 A, p. 377.
 Eocene (Wasatch); New Mexico.

Plastomenus costatus Cope.

- Cope, E. D.* 1875 E, pp. 94, 261, pl. viii, fig. 8.
 1875 I.
 1875 W, p. 337.
 Cretaceous (Laramie); Saskatchewan.

Plastomenus fractus Cope.

- Cope, E. D.* 1875 C, p. 35.
 1875 F, p. 96.
 1877 K, p. 49, pl. xxv, figs. 12-19.
 1884 O, p. 123.
 Eocene (Wasatch); New Mexico.

Plastomenus insignis Cope.

- Cope, E. D.* 1874 B, p. 454.
 1874 C, p. 29.
 1875 E, pp. 95, 261, pl. vi, fig. 10.
 Cretaceous (Laramie); Colorado.

Plastomenus lachrymalis Cope.

- Cope, E. D.* 1874 O, p. 15.
 1875 C, p. 35.
 1875 F, p. 96.
 1877 K, pp. 48, 51, pl. xxv, fig. 7.
 1884 O, p. 123.
 Eocene (Wasatch); New Mexico.

Plastomenus molopinus Cope.

- Cope, E. D.* 1872 M, p. 461. (Anostira.)
 1873 E, p. 620.
 1873 M, p. 279.
 1877 K, p. 50, pl. xxv, figs. 5, 6. (Var. ii of *P. communis*.)
 1884 O, pp. 123, 125, pl. xviii, figs. 9-14.

?Leidy, J. 1873 B, p. 180, pl. xvi, fig. 12.
 ("Trionyx.")
 Eocene (Bridger); Wyoming: (Wasatch);
 New Mexico.

Plastomenus oedemius Cope.

Cope, E. D. 1872 M, p. 461. (Anostira.)
 1873 E, p. 619.
 1873 M.
 1877 K, p. 48.
 1884 O, pp. 123, 126, pl. xviii, figs. 15-17.
 Eocene (Bridger); Wyoming.

Plastomenus punctulatus Cope.

Cope, E. D. 1874 B, p. 453.
 1874 C, p. 29.
 1875 E, pp. 94, 261, pl. vi, fig. 9.
 1877 G, p. 573.
 Cretaceous (Laramie); Colorado, South Dakota, Montana.

Plastomenus serialis Cope.

Cope, E. D. 1877 K, pp. 48, 51, pl. xxv, figs. 8-10.
 1875 C, p. 35. (P. ? thomasi.)

Cope, E. D. 1884 O, p. 123.
 Eocene (Wasatch); New Mexico.

Plastomenus thomasi Cope.

Cope, E. D. 1872 M, p. 462. (Trionyx.)
 1873 E, p. 618 (P. thomasi); p. 619 (P. multifoveatus).
 1873 M, p. 278 (P. thomasi); p. 279 (P. multifoveatus).
 1875 C, p. 35. (P. catenatus.)
 1875 F, p. 96. (P. catenatus, P. thomasi.)
 1877 K, pp. 49, 51 (P. thomasi); p. 49, pl. xxv, fig. 11 (P. multifoveatus).
 1884 O, pp. 123, 125 (P. thomasi); pp. 123, 124, pl. xviii, figs. 2-8 (P. multifoveatus).
 Eocene (Bridger); Wyoming: (Wasatch); New Mexico.

Plastomenus trionychoides Cope.

Cope, E. D. 1872 M, p. 461. (Anostira.)
 1873 E, p. 619.
 1873 M, p. 279.
 1884 O, p. 123, pl. xviii, fig. 1.
 Eocene (Bridger); Wyoming.

TRIONYCHIDÆ.

Agassiz, L. 1857 B, pp. 329, 394.

Baur, G. 1887 B, p. 96.

1888 B, p. 736.

1889 C.

1889 H.

1889 I, p. 273.

1891 C, p. 351.

1893 A, p. 213.

Boulenger, G. A. 1889 A, p. 241.

Cope, E. D. 1869 M, p. 150.

1882 E, p. 143.

1882 J, p. 989.

1884 O, pp. 111, 112.

Cope, E. D. 1889 R, p. 865.

Dollo, L. 1884 A.

1886 A.

1888 A.

Gray, J. E. 1873 C, p. 38.

Günther, A. 1888 A, p. 457.

Hoffmann, C. K. 1890 A.

Lydekker, R. 1889 G, p. 4.

Negri, A. 1892 A.

Siebenrock, F. 1897 A.

1898 A.

Steinmann and Döderlein 1890 A, p. 634.

Stranch, A. 1890 A, p. 33. (Trionychida.)

TRIONYX Geoffroy. Type *Testudo punctata* Lacépède.

St. Hilaire, G. 1809 A, p. 1.

Baur, G. 1893 A, p. 214.

Boulenger, G. A. 1889 A, p. 242.

Cope, E. D. 1869 M, p. 151.

1873 E, p. 649.

1875 C, p. 34.

1877 K, p. 43.

1884 O, pp. 112, 117.

Fürbringer, M. 1900 A, p. 320.

Gray, J. E. 1869 B, p. 212.

1873 A.

Hoffmann, C. K. 1890 A.

Leidy, J. 1871 C, p. 367.

Lydekker, R. 1889 G, p. 7.

Maack, G. A. 1869 A.

Owen, R. 1842 A, p. 168.

1849 B.

1849 C.

Pictet, F. J. 1853 A, p. 456.

Pictet and Humbert 1856 A.

Seeley, H. G. 1880 B, p. 410.

Siebenrock, F. 1897 A.

1898 A.

Wagler, J., 1830, Nat. Syst. Amphib., p. 134.

Winckler, T. C. 1869 A.

Zittel, K. A. 1890 A, p. 515.

It is highly probable that none of the species here recorded under *Trionyx* really belongs under the genus as understood in recent works on living turtles, especially as the genus was restricted by Wagler in 1830. See Dr. Baur as above cited.

Trionyx buiei Cope.

Cope, E. D. 1869 M, pp. 151, 153.

1875 V, p. 34.

Miocene; North Carolina.

Trionyx cariosus Cope.

Cope, E. D. 1875 C, p. 35.

1875 F, p. 95.

1877 K, p. 44, pl. xxvi, figs. 5-10.

1884 O, p. 118.

Eocene (Wasatch); New Mexico.

Trionyx cellulosus Cope.

Cope, E. D. 1867 C, p. 142.

Miocene; Maryland.

Trionyx coalescens (Cope).

Cope, E. D. 1875 E, pp. 93, 261, pl. viii, figs. 6, 7.
(Plastomenus.)

1875 I. (Plastomenus.)

Lambe, L. M. 1899 A, pp. 68, 70. (Plastomenus.)
Cretaceous (Laramie); Saskatchewan.

Trionyx concentricus Cope.

Cope, E. D. 1872 M, p. 461.

1873 E, p. 617.

1884 O, pp. 118, 120, pl. xvi, figs. 3-6.

Eocene (Bridger); Wyoming.

Trionyx foveatus Leidy.

Leidy, J. 1856 F, p. 73.

Baur, G. 1891 B, p. 418.

Cope, E. D. 1869 M, p. 152.

1874 C, p. 29.

1875 F, p. 260.

1877 G, p. 573.

Leidy, J. 1856 C, p. 120.

1856 Q, p. 312.

1860 A, p. 148, pl. xi, figs. 1-3.

Marsh, O. C. 1897 C, p. 527.

Cretaceous (Laramie); Montana, Colorado.

Trionyx guttatus Leidy.

Leidy, J. 1869 B, p. 66.

Cope, E. D. 1869 M, pp. 151, 152.

1873 E, p. 617.

1875 C, p. 35. (T. uintaensis.)

1875 F, p. 95. (T. uintaensis.)

1877 K, p. 46.

1884 O, p. 119.

King, C. 1878 A, p. 404.

Leidy, J. 1871 C, p. 367.

1872 B, p. 370.

1873 B, pp. 176, 342, pl. ix, fig. 1.

Eocene (Bridger); Wyoming; (Wasatch); New Mexico.

Trionyx halophilus Cope.

Cope, E. D. 1869 G, p. 12.

1869 B, p. 735.

1869 M, p. 151, pl. vii, fig. 15.

1875 E, p. 261.

(Cretaceous (Green-sand No. 4); Delaware,
New Jersey, Virginia.)

Trionyx heteroglyptus Cope.

Cope, E. D. 1873 M.

1873 E, p. 616.

1884 O, pp. 118, 120, pl. xvi, fig. 2.

Eocene (Bridger); Wyoming.

Trionyx leptomitrus Cope.

Cope, E. D. 1875 C, p. 35.

1875 F, p. 95.

1877 K, p. 44, pl. xxv, figs. 27-31; pl. xxvi,
figs. 1-4.

1884 O, p. 118.

King, C. 1878 A, p. 377.

Eocene (Wasatch); New Mexico.

Trionyx leucopotamicus Cope.

Cope, E. D. 1891 A, p. 5, pl. i, figs. 8, 9.

Ami, H. M. 1891 A.

Oligocene (White River); N. W. Terr. of British America, North Dakota.

Trionyx lima Cope.

Cope, E. D. 1869 G, p. 12.

1869 K, p. 90.

1869 M, pp. 151, 153, pl. vii, fig. 14.

1875 H, p. 363.

Miocene; New Jersey.

Trionyx mammilaris Cope.

Cope, E. D. 1877 G, p. 573. (No description.)

Cretaceous (Laramie); Montana.

Trionyx pennatus Cope.

Cope, E. D. 1869 G, p. 12.

1869 B, p. 735.

1869 M, p. 152, pl. vii, fig. 13.

Eocene (Green-sand); New Jersey.

Trionyx priscus Leidy.

Leidy, J. 1851 H, p. 329.

Cope, E. D. 1869 B, p. 735.

1869 G, p. 12.

1869 M, pp. 151, 153.

1875 E, p. 260.

Leidy, J. 1865 A, pp. 113, 120, pl. xviii, fig. 9.

Maack, G. A. 1869 A, p. 281.

Cretaceous (Green-sand No. 4); New Jersey.

Trionyx punctiger Cope.

Cope, E. D. 1891 A, p. 5.

1883 F, p. 217 ("Trionyx sp. 2").

Oligocene (White River); South Dakota.

Trionyx radulus Cope.

Cope, E. D. 1875 C, p. 35.

1875 F, p. 95.

1877 K, p. 45, pl. xxvi, figs. 11-16.

1884 O, pp. 118, 119.

King, C. 1878 A, p. 377.

Eocene (Wasatch); New Mexico; (Bridger);
Wyoming.

Trionyx scutumantiquum Cope.

Cope, E. D. 1873 E, p. 617.

1882 J, p. 988, fig. 6.

1884 O, pp. 118, 121, pl. xvi, figs. 1, 1a.

King, C. 1878 A, p. 376.

Eocene (Wasatch); Wyoming.

Trionyx uintaensis Leidy.

Leidy, J. 1872 I, p. 267.

Cope, E. D. 1884 O, p. 118.

1891 A, p. 5.

Leidy, J. 1873 B, pp. 178, 342, pl. xxix, fig. 1.

Eocene (Bridger); Wyoming.

Trionyx vagans Cope.

Cope, E. D. 1874 B, p. 453.

1874 C, p. 29.

1875 E, pp. 96, 260, pl. vi, figs. 13, 14.

1875 I, p. 1.

1877 G, p. 573.

Leidy, J. 1856 Q, p. 312. (T. foveatus.)

Cretaceous (Laramie); Colorado, Montana,
Saskatchewan.

Trionyx ventricosus Cope.Cope, *F. D.* 1877 K, p. 45.

1884 O, p. 118.

Eocene (Wasatch); New Mexico.

Trionyx virginianus Clark.Clark, *W. B.* 1895 A, p. 4.

1897 A, p. 59, pl. viii, figs. 1a, 1b.

Eocene; Virginia.

Trionyx sp. indet.

Unnamed specimens of *Trionyx* have been reported as follows: Leidy, J. 1873 B, pp. 180, 342, pl. xvi, figs. 11, 12; Eocene, Wyoming. Leidy, J. 1877 A, p. 233, pl. xxxiv, fig. 3; Phosphate beds, South Carolina. Cope, E. D. 1867 C, p. 143; Miocene, Maryland. Cope, E. D. 1888 CC, p. 301; Puerco beds, New Mexico.

AXESTEMYS Hay. Type *Axestus byssinus* Cope.Hay, *O. P.* 1899 G, p. 348.

The following authors call this genus *Axestus*; but this name is preoccupied in entomology.

Cope, *E. D.* 1872 M, p. 462.

1873 E, p. 615.

1882 E, p. 144.

1884 O, pp. 112, 116.

Lydekker, *R.* 1889 G, p. 7.

Nicholson and Lydekker 1889 A, p. 1118.

Zittel, *K. A.* 1890 A, p. 517.**Axestemys byssinus** (Cope).Cope, *E. D.* 1872 M, p. 462. (*Axestus byssinus*; misprint.)1873 E, p. 616. (*Axestus*.)1884 O, p. 116, pl. xv, figs. 1-12. (*Axestus*.)Hay, *O. P.* 1899 G, p. 348.

Eocene (Bridger); Wyoming.

Order PLESIOSAURIA.

Andrews, *C. W.* 1895 C.1895 D. (*Sauropterygia*.)

1895 E.

1896 A.

Baur, *G.* 1886 F. (*Sauropterygia*.)1887 A, p. 485. (*Sauropterygia*.)1887 C. (*Sauropterygia*.)

1890 B.

Cope, *E. D.* 1869 M, p. 31. (*Sauropterygia*.)1871 B, p. 235. (*Sauropterygia*.)1872 F, p. 327. (*Sauropterygia*.)1875 E, p. 69. (*Sauropterygia*.)1879 I. (*Sauropterygia*.)1885 G, p. 246. (*Sauropterygia*.)1887 G, p. 564. (*Polycotylinae*.)1887 S, p. 334. (*Sauropterygia*.)

1888 S.

1889 R, p. 863.

1891 N, p. 39.

1892 R. (*Sauropterygia*.)1892 Z, p. 21. (*Sauropterygia*.)

1898 B, pp. 55, 66.

1900 A, p. 159.

Dames, *W.* 1895 A.Deccke, *W.* 1895 A. (*Nothosaurus*.)Fürbringer, *M.* 1900 A, pp. 321, 527, 635. (*Sauropterygia*.)Gadow, *H.* 1898 A, p. 23. (*Plesiosauri*.)Gegenbaur, *C.* 1898 A.Geissler, *G.* 1895 A. (*Nothosaurus*.)Günther, *A.* 1886 A, p. 444. (*Sauropterygia*.)Gürich, *G.* 1891 B. (*Nothosaurus*.)Haeckel, *E.* 1895 A, p. 335. (*Sauropterygia*.)Hay, *O. P.* 1899 F, p. 682.Hulke, *J. W.* 1892 A. (*Sauropterygia*.)Huxley, *T. H.* 1872 A, p. 180.Koken, *E.* 1893 A.Kükenthal, *W.* 1890 C, p. 176.Lydekker, *R.* 1889 F, p. 118. (*Sauropterygia*.)Meyer, *H.* 1855 A. (*Nothosaurus*.)Nicholson and Lydekker 1889 A, p. 1067. (*Sauropterygia*.)Owen, *R.* 1840 E.

1847 E.

1860 A, p. 159. (*Sauropterygia*.)1860 E, p. 211. (*Sauropterygia*.)1866 A, p. 16. (*Sauropterygia*.)1883 A. (*Sauropterygia*.)Quenstedt, *F. A.* 1852 A, p. 130. (*Plesiosauri*.)1885 A, p. 208. (*Plesiosauri*.)Seeley, *H. G.* 1874 A.1892 B, p. 121. (*Sauropterygia*.)Steinmann and Döderlein 1890 A, p. 625. (*Sauropterygia*.)Woodward, *A. S.* 1898 B, p. 159. (*Sauropterygia*.)Zittel, *K. A.* 1890 A, p. 473. (*Sauropterygia*.)

PLESIOSAURIDÆ.

Fürbringer, *M.* 1900 A.Hoffmann, *C. K.* 1890 B.Hulke, *J. W.* 1892 A.Huxley, *T. H.* 1858 B.Lydekker, *R.* 1889 F, p. 120.

Nicholson and Lydekker 1889 A, p. 1074.

Owen, *R.* 1866 A.Sauvage, *H. E.* 1878 A.Seeley, *H. G.* 1892 B.

Steinmann and Döderlein 1890 A, p. 628.

Zittel, *K. A.* 1890 A, p. 486.

PLESIOSAURUS Conybeare. Type *P. dolichodeirus* Conybeare.

Conybeare, W. D., 1821, Trans. Geol. Soc., v, pt. 2, p. 560.

Andrews, C. W. 1895 B.

1895 C.

1896 A.

Barrett, L. 1859 A.

Buckland, W. 1837 A, i, p. 157; ii, pls. xvi-xix.

Conybeare, W. D. 1824 A, p. 119.

Cope, E. D. 1870 D, p. 274. (*Taphrosaurus*, type *P. lockwoodii*.)

1875 E, pp. 88, 256.

1879 A, p. 34.

Cuvier, G. 1834 A, x, pp. 445-470, pls. cclix, cclx.

Dames, W. 1895 A.

Fürbringer, M. 1900 A, p. 326.

Hulke, J. W. 1883 A.

1892 A.

Huxley, T. H. 1872 A, p. 182.

Kiprijanoff, W. 1882 A.

Lydekker, R. 1889 F, pp. viii, 251.

Marsh, O. C. 1877 E.

Newberry, J. S. 1875 A, p. 18.

Owen, R. 1840 A, p. 49.

1840 E.

1845 B, p. 275, pls. lxxiii, lxxiv.

1851 B, p. 58.

1860 A, p. 160.

1860 E, p. 233.

1864 B, p. 1.

1865 A, p. 1.

1883 A.

Pictet, F. J. 1853 A, p. 534.

Quenstedt, F. A. 1852 A, p. 130.

1885 A, p. 208.

Sauvage, H. E. 1878 A.

Seeley, H. G. 1874 A.

1887 C.

1888 A.

1892 B.

1896 A.

Sollas, W. J. 1882 A.

Steinmann and Döderlein 1890 A, p. 629.

Williston S. W. 1893 A.

1894 A.

Winckler, T. C. 1873 A.

Woodward, A. S. 1888 I, p. 277.

1898 B, p. 165.

Zittel, K. A. 1890 A, p. 486.

Plesiosaurus brevifemur Cope.

Cope, E. D. 1875 E, p. 256.

1869 M, p. 41, figs. 13-15; p. 43, in part.

(*Cimoliasaurus magnus*.)

Cretaceous (Green-sand No. 5); New Jersey.

Plesiosaurus gouldii Willist.

Williston, S. W. 1897 C.

Cretaceous (Comanche); Kansas.

Plesiosaurus gulo Cope.

Cope, E. D. 1872 BB.

1872 GG.

1874 C, p. 28.

1875 E, pp. 52, 88, 256.

Cretaceous (Niobrara); Kansas.

Plesiosaurus lockwoodii Cope.

Cope, E. D. 1869 M, p. 40.

1870 D, p. 274. (*Taphrosaurus*.)

1875 E, p. 256. (*Plesiosaurus*.)

Cretaceous (Clay No. 1); New Jersey.

Plesiosaurus mudgei Cragin.

Cragin, F. W. 1894 A, p. 69, pl. i, figs. 1-3, 4?

Cretaceous (Neocomian); Kansas.

Plesiosaurus shirleyensis Knight.

Knight, W. C. 1900 A, p. 115, figs. A and C.

Jurassic (Shirley); Wyoming.

PANTOSAURUS Marsh. Type *Parasaurus striatus* Marsh.

Marsh, O. C. 1893 J, p. 159. (To replace *Parasaurus* Marsh, preoccupied.)

1891 F, p. 338. (*Parasaurus*; no definition.)

1895 A, p. 406.

Pantosaurus striatus Marsh.

Marsh, O. C. 1893 J, p. 159.

Marsh, O. C. 1891 F, p. 338. (*Parasaurus*; no description.)

1895 A, p. 406, fig. 3.

1897 C, p. 485, fig. 32.

Jurassic; Wyoming.

PIRATOSAURUS Leidy. Type *P. plicatus* Leidy.

Leidy, J. 1865 A, p. 29.

Zittel, K. A. 1890 A, p. 498.

A genus of uncertain affinities.

Piratosaurus plicatus Leidy.

Leidy, J. 1865 A, pp. 29, 116, pl. xix, fig. 8.

Cope, E. D. 1869 M, p. 56.

1875 E, p. 254.

Leidy, J. 1865 D, p. 68.

Cretaceous; Minnesota.

NOTHOSAUROPS Leidy. Type *N. occiduus* Leidy.*Leidy, J.* 1870 U.Cope, E. D. 1874 C, p. 28. (Syn. of *Plesiosaurus*.)
1875 E, p. 256. (Syn. of *Plesiosaurus*.)Leidy, J. 1873 B, p. 287. (*Nothosaurus*.)Zittel, K. A. 1890 A, p. 600. (Syn.? of *Champsosaurus*.)

A genus of uncertain position.

Nothosaurops occiduus Leidy.*Leidy, J.* 1870 U.Cope, E. D. 1874 C, p. 28. (*Plesiosaurus*.)1875 E, p. 256. (*Plesiosaurus*.)Leidy, J. 1873 B, pp. 287, 345, pl. xv, figs. 11-13.
(*Nothosaurus*.)

Cretaceous (Laramie); S. Dakota.

MEGALNEUSAURUS Knight. Type *Cimoliosaurus rex* Knight.*Knight, W. C.* 1898 B, p. 378.**Megalneusaurus rex** Knight.*Knight, W. C.* 1895 A. (*Cimoliosaurus*.)

1898 B, p. 379, figs. 1-3.

Jurassic; Wyoming.

ELASMOSAURIDÆ

Cope, E. D. 1869 M, p. 47.

1875 E, pp. 69, 78.

Fürbringer, M. 1900 A, pp. 322, 527.

Seeley, H. G. 1892 B, pp. 134, 151.

POLYCOTYLUS Cope. Type *P. latipinnis* Cope.*Cope, E. D.* 1869 D.

1869 M, p. 34.

1871 D, p. 386.

1872 F, p. 335.

1875 E, p. 70.

1887 G, p. 564.

1888 S.

Lydekker, R. 1889 C, p. 52. (Syn. of *Cimoliasaurus*.)Nicholson and Lydekker 1889 A, p. 1077. (Syn. of *Cimoliasaurus*.)

Sauvage, H. E. 1876 A.

1878 A, p. 35.

Seeley, H. G. 1892 B, p. 135.

Zittel, K. A. 1890 A, p. 491. (Syn. of *Cimoliasaurus*.)**Polycotylus latipinnis** Cope.*Cope, E. D.* 1869 D.

1869 M, p. 36, pl. i, figs. 1-12.

1871 D, p. 388.

1872 F, pp. 320, 335.

1874 C, p. 27.

1875 E, pp. 45, 72, 255, pl. vii, figs. 7, 7a

Leidy, J. 1873 B, p. 279.

Cretaceous (Niobrara); Kansas, Nebraska

PIPTOMERUS Cope. Type *P. megaloporus* Cope.*Cope, E. D.* 1887 G, p. 564.

Lydekker, R. 1889 C, p. 182.

Seeley, H. G. 1892 B, pp. 136, 138.

Zittel, K. A. 1890 A, p. 495.

Piptomerus hexagonus Cope.*Cope, E. D.* 1887 G, p. 565.

Cretaceous (Fox Hills); N. Mexico.

Piptomerus megaloporus Cope.*Cope, E. D.* 1887 G, p. 564.

Cretaceous (Fox Hills); N. Mexico.

Piptomerus microporus Cope.*Cope, E. D.* 1887 G, p. 565.

Cretaceous (Fox Hills); N. Mexico.

URONAUTES Cope. Type *U. cetiformis* Cope.*Cope, E. D.* 1876 I, p. 345.

Lydekker, R. 1889 F, p. 182.

Seeley, H. G. 1892 B, p. 136.

Zittel, K. A. 1890 A, p. 498.

Uronautes cetiformis Cope.*Cope, E. D.* 1876 I, p. 346.

Cretaceous (Fox Hills); Montana.

Uronautes sp. indet.

Cope, E. D. 1887 G, p. 566.

Cretaceous (Fox Hills); New Mexico.

TRINACROMERUM Cragin. Type *T. bentonianum* Cragin.

- Cragin*, F. W. 1888 A.
 Cope, E. D. 1894 B, p. 111.
Cragin, F. W. 1891 A.
 Lydekker, R. 1889 F, p. 180. (Syn. of *Cimoliasaurus*.)
 Nicholson and Lydekker 1889 A, p. 1079. (Trinacromerum.)

- Sceley, H. G. 1892 B, pp. 136, 151.
 Zittel, K. A. 1890 A, p. 495.

Trinacromerum bentonianum Cragin.

- Cragin*, F. W. 1888 A.
 1891 A.
 Cretaceous (Benton); Kansas.

ELASMOSAURUS Cope. Type *E. platyurus* Cope.

- Cope*, E. D. 1868 A.
 1868 H.
 1869 A, p. 266.
 1869 K, p. 86.
 1869 M, pp. 40, 44, 47, and ii.
 1870 C.
 1871 D, p. 391.
 1872 F, p. 336.
 1875 E, pp. 75, 78, 255.
 1877 G, p. 577.
 1879 I.
 1888 S, p. 725.
Hulke, J. W. 1883 A.
 1892 A.
Leidy, J. 1851 G, p. 326. (*Discosaurus*, type *D. vetustus* Leidy.)
 1870 A. (*Discosaurus*=*Elamosaurus*.)
 1870 C.
 1870 H, p. 18.
 1870 I, p. 18.
Lydekker, R. 1888 E.
 1889 C, p. 53. (Syn. of *Cimoliasaurus*.)
 1889 F, p. 180. (Syn. of *Cimoliasaurus*.)
 Nicholson and Lydekker 1889 A, p. 1077. (Syn. of *Cimoliasaurus*.)
Sauvage, H. E. 1878 A.
Sceley, H. G. 1892 B, p. 134.
Zittel, K. A. 1890 A, p. 491. (Syn. of *Cimoliasaurus*.)

Elamosaurus intermedius Cope.

- Cope*, E. D. 1894 B, p. 112.
 Cretaceous (Pierre); S. Dakota.

Elamosaurus orientalis Cope.

- Cope*, E. D. 1868 M.
 1869 A, p. 266.
 1869 B, p. 733.

- Cope*, E. D. 1869 K, p. 87.
 1869 M, pp. 42, 55, pl. ii, fig. 10.
 1870 C.
 1875 E, p. 255.
 1877 G, pp. 567, 578.
 1877 U.
Leidy, J. 1870 I, p. 22. (*Discosaurus*.)
 Cretaceous; New Jersey, Upper Missouri region.

Elamosaurus platyurus Cope.

- Cope*, E. D. 1868 A.
 1868 D.
 1869 A, p. 266.
 1869 K, p. 87.
 1869 M, p. 47, text figs. 7-12; pl. ii, figs. 1-9, pl. iii.
 1870 B.
 1871 C, p. 47.
 1871 D, p. 393.
 1872 F, pp. 320, 336.
 1875 E, pp. 44, 79, 256.
 1877 G, p. 578.
 1888 S.
Leidy, J. 1870 A.
 1870 G, p. 10.
 1870 I, pp. 18, 22.
Lydekker, R. 1889 F, p. 181. (*Cimoliasaurus*.)
 Cretaceous (Niobrara); Kansas.

Elamosaurus serpentinus Cope.

- Cope*, E. D. 1877 G, p. 578.
 1877 U.
 Cretaceous (Niobrara); Nebraska.

Elamosaurus sp. indet.

- Cope*, E. D. 1894 B, p. 113.
 Cretaceous (Niobrara); Dakota

CIMOLIASAURUS Leidy. Type *C. magnus* Leidy.

- Leidy*, J. 1851 G, p. 325.
Cope, E. D. 1868 H.
 1869 A, p. 266.
 1869 K, p. 86.
 1869 M, p. 40.
 1870 B.
 1870 C.
 1871 D, p. 393.
 1875 E, pp. 75, 78, 255.
 1888 S, p. 725.
Fürbringer, M. 1900 A, p. 335.
Koken, E. 1896 A, p. 9.
Leidy, J. 1851 G, p. 326. (*Discosaurus*, type *D. vetustus*.)
 1854 B. (*Brimosaurus*, type *B. grandis*.)

- Leidy*, J. 1865 A, pp. 22, 25, 76, 103, 116. (*Cimoliasaurus*, *Discosaurus*.)
 1870 A. (*Discosaurus*.)
 1870 B. (*Discosaurus*, *Cimoliasaurus*.)
 1870 G. (*Brimosaurus*.)
 1870 H, p. 21.
 1870 I. (*Discosaurus*.)
Lydekker, R. 1888 E.
 1889 C, p. 53.
 1889 F, pp. viii, 180.
 Nicholson and Lydekker 1889 A, p. 1077.
Sceley, H. G. 1892 B, p. 135.
 Williston, S. W. 1890 A.
 Woodward, A. S. 1898 B, p. 169.
Zittel, K. A. 1890 A, p. 491.

Cimoliasaurus grandis (Leidy).*Leidy, J.* 1854 B, pl. ii, figs. 1-3. (Brimosaurus.)

Cope, E. D. 1869 A, p. 266.

1869 M, pp. 43, 54.

1870 C.

1871 D, p. 400.

1875 E, p. 255.

Leidy, J. 1870 G, p. 10. (Brimosaurus.)

1870 I, p. 22. (Discosaurus.)

Cretaceous; Arkansas.

Cimoliasaurus laramiensis Knight.*Knight, W. C.* 1900 A, p. 117, figs. B and D.

Jurassic (Shirley); Wyoming.

Cimoliasaurus magnus Leidy.*Leidy, J.* 1851 G, p. 325.

Cope, E. D. 1869 A, p. 266.

1869 B, p. 733.

1869 K, p. 87.

1869 M, pp. 42, 43 (part), fig. 16; not figs. 13-15.

1870 B.

1870 C.

1875 E, p. 255.

Leidy, J. 1854 B, pl. ii, figs. 4-6.

1865 A, pp. 25, 116, pl. v, figs. 13-19; pl. vi, figs. 1-18.

1870 G, p. 10.

1870 I, p. 22. (Discosaurus.)

Lydekker, R. 1889 F, p. 211.

Cretaceous (Green-sand No. 5); New Jersey.

Cimoliasaurus planior (Leidy).*Leidy, J.* 1870 I, pp. 20, 22. (Discosaurus.)

Cope, E. D. 1875 E, p. 255.

Leidy, J. 1865 A, p. 23, par. 2, pl. v, figs. 10-12. (Discosaurus vetustus.)

1865 D, p. 68. (Discosaurus vetustus, part.)

Cretaceous; Mississippi.

Cimoliasaurus snowii Williston.*Williston, S. W.* 1890 A, p. 262.

Cope, E. D. 1894 B, p. 109, figure.

Williston, S. W. 1890 D, figs. 1, 2.

Cretaceous (Niobrara); Kansas.

Cimoliasaurus vetustus (Leidy).*Leidy, J.* 1851 G, p. 326. (Discosaurus.)Cope, E. D. 1869 A, p. 266. (C. magnus, *vide* Leidy.)

1869 M, p. 42.

1870 B, p. 141. (Discosaurus.)

1875 E, p. 255.

Leidy, J. 1865 A, pp. 22, 116, pl. iv, figs. 13-18, pl. v, figs. 1-9. (Discosaurus.)

1865 D, p. 68, in part. (Discosaurus.)

1870 I, p. 21. (Discosaurus.)

Lydekker, R. 1889 F, p. 211. (Syn. of C. magnus.) Cretaceous; Alabama, New Jersey.

The vertebræ figured on pl. v, figs. 4, 5, 6, of *Leidy* 1865 A, must be regarded as the type of this species.**Cimoliasaurus** sp. indet.*Williston, S. W.* 1894 B, p. 2, pl. i, figs. 1, 2.

Cretaceous; Kansas.

OROPHOSAURUS Cope. Type *O. pauciporus* Cope.*Cope, E. D.* 1887 G, p. 564.

1894 B, p. 311.

Lydekker, R. 1889 F, p. 182.

Seeley, H. G. 1892 B, p. 136.

Zittel, K. A. 1890 A, p. 491. (Syn. of Cimoliasaurus.)

Orophosaurus pauciporus Cope.*Cope, E. D.* 1887 G, p. 565.

Cretaceous (Fox Hills); New Mexico.

EMBAPHIAS Cope. Type *E. circulosus* Cope.*Cope, E. D.* 1894 B, p. 111.**Embaphias circulosus** Cope.*Cope, E. D.* 1894 B, p. 111.

Cretaceous (Pierre); South Dakota.

OLIGOSIMUS Leidy. Type *O. grandævus* Leidy.*Leidy, J.* 1872 E, p. 39.

1873 B, p. 286.

Lydekker, R. 1889 C, p. 180. (Syn. ? of Cimoliasaurus.)

Seeley, H. G. 1892 B, p. 135.

Zittel, K. A. 1890 A, p. 495. (Oligosomus.)

Oligosimus grandævus Leidy.*Leidy, J.* 1872 E, p. 39.

1873 B, pp. 286, 345, pl. xvi, figs. 18, 19.

Cretaceous?; Wyoming.

Order RHYNCHOCEPHALIA Günther.

Günther, A. 1867 A, p. 626.

Ammon, L. 1885 A. (Homœosaurus.)

Andreae, A. 1893 A.

Baur, G. 1885 E, p. 635.

1886 E.

Baur, G. 1886 G, pp. 685, 733.

1886 M, p. 304.

1887 A, p. 486.

1887 C.

1889 B, p. 45.

Baur, G. 1894 A, p. 321.

1895 E.

1900 A, p. 160.

Baur and Case 1897 A.

Boulenger, G. A. 1889 A, p. 1.

1891 B.

Burckhardt, R. 1895 A.

Case, E. C. 1898 A, p. 71.

Cope, E. D. 1869 M, p. 33.

1871 B.

1878 G, p. 306.

1880 A, p. 38.

1885 G, p. 246.

1887 E.

1887 S, p. 334.

1889 R, p. 863.

1891 N, p. 45.

1892 R.

1898 B, pp. 56, 73.

Credner, H. 1888 A.

Fürbringer, M. 1888 A.

Fürbringer, M. 1900 A, pp. 276, 531, 589.

Gadow, H. 1898 A, p. 18. (Rhynchocephali.)

Gaupp, E. 1894 A.

Gegenbaur, C. 1898 A.

Haeckel, E. 1895 A, p. 305.

Hoffmann, C. K. 1890 B.

Huxley, T. H. 1872 A, p. 194.

Lortet, L. 1892 A, p. 29.

Lydekker, R. 1888 B, p. 291.

Meyer, H. 1856 B. (Protosaurus.)

1860 D, p. 106. (Homæosaurus.)

Mivart, St. G. 1886 A, p. 448.

Nicholson and Lydekker 1889 A, p. 1131.

Osborn, H. F. 1900 A, p. 1.

Perrin, A. 1895 A.

Siebenrock, F. 1894 B. (Hatteria.)

Steinmann and Döderlein 1890 A, p. 619.

Wagner, A. 1853 A, p. 254.

Woodward, A. S. 1898 B, p. 183.

Zittel, K. A. 1890 A, pp. 451, 583.

SPHENODON Gray. Type *Hatteria punctata* Gray.

Gray, J. E., 1831, Zool. Miscell., p. 13.

On account of the importance of the genus *Sphenodon* in ascertaining the relationship of the reptiles, the following references are given to the literature of this animal:

Ammon, L. 1885 A. (Hatteria.)

Andreæ, A. 1893 A. (Hatteria.)

Baur, G. 1886 A.

1886 B.

1886 K.

1886 L.

1891 C, p. 345.

1892 D, p. 207.

Bayer, F. 1885 A.

Boulenger, G. A. 1889 A, p. 2.

Burckhardt, R. 1900 A.

Credner, H. 1888 A.

Dollo, L. 1891 A.

Fürbringer, M. 1900 A.

Gadow, H. 1896 A, p. 37.

Günther, A. 1867 A. (Hatteria.)

Hay, O. P. 1898 F, p. 945.

Howes and Swinerton 1900 A, p. 516.

Huxley, T. H. 1869 C.

1887 A.

Kehrer, G. 1886 A, p. 83.

Osawa, G. 1898 A. (Hatteria.)

Osborn, H. F. 1900 A, p. 1.

Siebenrock, F. 1894 B.

Tomes, C. 1898 A, p. 273.

Zittel, K. A. 1890 A, p. 583.

CHAMPSOSAURIDÆ.

Cope, E. D. 1884 O, p. 106.

Boulenger, G. A. 1891 B, p. 169.

Burckhardt, R. 1900 A, p. 534.

Cope, E. D. 1876 I, p. 350. (Choristodera.)

1882 J, p. 981. (Choristodera.)

1884 BB.

1891 N, p. 45. (Choristodera.)

Cope, E. D. 1898 B, p. 73. (Choristodera.)

Dollo, L. 1884 C, p. 160. (Simædosauria.)

Lemoine, V. 1884 A.

1884 B. (Simædosauria.)

1885 A. (Simædosauria.)

Nicholson and Lydekker 1889 A, p. 1133.

Zittel, K. A. 1890 A, p. 599.

CHAMPSOSAURUS Cope. Type *C. profundus* Cope.

Cope, E. D. 1876 I, p. 348.

Andreæ, A. 1893 A, p. 33.

Baur, G. 1887 C, p. 100.

1895 E.

Cope, E. D. 1883 E.

1884 O, p. 104.

1888 C.

Dollo, L. 1884 C, p. 154. (Simædosaurus.)

1885 A.

1891 A.

1893 B, p. 79.

Fürbringer, M. 1900 A, p. 291.

Koken, E. 1886 A.

Lemoine, V. 1884 A. (Simædosaurus.)

1884 B. (Simædosaurus.)

1885 A. (Simædosaurus.)

1885 B. (Simædosaurus.)

1893 A, p. 364. (Simædosaurus.)

Nicholson and Lydekker 1889 A, p. 1133.

Steinmann and Döderlein 1890 A, p. 622.

Woodward, A. S. 1898 B, p. 189.

Zittel, K. A. 1890 A, p. 600.

Champsosaurus annectens Cope.

Cope, E. D. 1876 I, p. 351.

1877 G, p. 573.

Cretaceous (Laramie); Montana.

Champsosaurus australis Cope.*Cope, E. D.* 1881 T.

1884 O, p. 107, pl. xxiii b, figs. 1-4.

1888 CC, p. 301.

Eocene (Puerco); N. Mexico.

Champsosaurus brevicollis Cope.*Cope, E. D.* 1876 I, p. 352.

1877 G, p. 573.

Cretaceous (Laramie); Montana.

Champsosaurus profundus Cope.*Cope, E. D.* 1876 I, p. 350.

1877 G, p. 573.

Cretaceous (Laramie); Montana.

Champsosaurus puercensis Cope.*Cope, E. D.* 1882 E, p. 195.

1884 O, p. 107, pl. xxiii b, figs. 5-10.

1888 CC, p. 301.

Eocene (Puerco); N. Mexico.

Champsosaurus saponensis Cope.*Cope, E. D.* 1882 E, p. 196.

1884 O, p. 109, pl. xxiii, figs. 11-22.

1888 CC, p. 301.

Eocene (Puerco); N. Mexico.

Champsosaurus vaccinsulensis Cope.*Cope, E. D.* 1876 I, p. 353.

1877 G, p. 573.

Cretaceous (Laramie); Montana.

RHABDOPELIX Cope. Type *R. longispinis* Cope.*Cope, E. D.* 1869 M, p. 169.

The position of this genus in the zoological system is problematical.

Rhabdopelix longispinis Cope.*Cope, E. D.* 1869 M, pp. 170, 245, fig. 46.

1866 G. (Pterodactylus; no description.)

1870 I, p. 445.

Triassic; Pennsylvania.

ISCHYROTHERIUM Leidy. Type *I. antiquum* Leidy.*Leidy, J.* 1856 I, p. 89.*Cope, E. D.* 1869 M, p. 38. (*Ischyrosaurus*.)1874 R. (*Ischyrosaurus*.)1875 E, p. 256. (*Ischyrosaurus*.)1884 O, p. 106. (*Ischyrosaurus*.)*Leidy, J.* 1874 A.*Zittel, K. A.* 1890 A, p. 498. (*Ischyrosaurus*.)

The position of this genus is uncertain.

Ischyrotherium antiquum Leidy.*Leidy, J.* 1856 I, p. 89.*Cope, E. D.* 1869 M, p. 39. (*Ischyrosaurus*.)1874 C, p. 28. (*Ischyrosaurus*.)1875 E, p. 256. (*Ischyrosaurus*.)*Leidy, J.* 1860 A, p. 150, pl. x, figs. 8-17.

1869 A, p. 414.

Lepsius, G. R. 1881 A, p. 185. (Syn. of *Prorastomus sirenoides*.)**Order ICHTHYOSAURIA** Blainville.*Agassiz, L.* 1843 A, p. 84. (*Ichthyosauria*.)*Bauer, F.* 1898 A, p. 283.*Baur, G.* 1886 F. (*Ichthyopterygia*.)1887 A. (*Ichthyopterygia*.)1887 C, p. 95. (*Ichthyopterygia*.)1887 D. (*Ichthyopterygia*.)1887 F. (*Ichthyopterygia*.)1890 B. (*Ichthyosauria*.)1891 C, p. 354. (*Ichthyosauria*.)1895 C. (*Ichthyosauria*.)1895 E. (*Ichthyosauria*.)*Cope, E. D.* 1869 M, pp. 26, 27. (*Ichthyopterygia*.)1871 B. (*Ichthyopterygia*.)1887 S, p. 333. (*Ichthyopterygia*.)1888 S. (*Ichthyosauria*.)1889 R, p. 863. (*Ichthyopterygia*.)1892 R. (*Ichthyopterygia*.)1895 C. (*Ichthyosauria*.)1898 B, pp. 55, 64. (*Ichthyopterygia*.)1900 A, p. 159. (*Ichthyopterygia*.)*Dames, W.* 1893 A. (*Ichthyopterygia*.)

1895 B, p. 1045. ("Ichthyosaurier.")

Fraas, E. 1891 A.*Fürbringer, M.* 1900 A. (*Ichthyopterygia*.)*Gadow, H.* 1898 A, p. 24.*Gaudry, A.* 1890 A, p. 179.*Gegenbaur, C.* 1864 A, p. 31. (*Enaliosauria*.)1865 B, p. 51. (*Enaliosauria*.)

1898 A.

Haeckel, E. 1895 A, p. 337. (*Ichthyopterygia*.)*Hay, O. P.* 1899 F, p. 682. (*Ichthyosauria*.)*Hoffmann, C. K.* 1890 B. (*Ichthyosauria*.)*Hulke, J. W.* 1883 A. (*Ichthyosauria*.)1892 A. (*Ichthyosauria*.)*Huxley, T. H.* 1872 A, p. 208. (*Ichthyosauria*.)*Jaeger, G. F.* 1828 A. (*Ichthyosauria*.)*Conybeare, Trans. Geol. Soc., London* (1), v, pt. 2,p. 563. (*Ichthyosauria*.)*Kükenthal, W.* 1890 C, p. 176. (*Ichthyosauria*.)1891 C. (*Ichthyosauria*.)1893 A, p. 54. (*Ichthyosauria*.)*Lydekker, R.* 1888 D. (*Ichthyopterygia*.)1889 F, p. 1. (*Ichthyopterygia*.)1892 B. (*Ichthyosauria*.)*Marsh, O. C.* 1879 A, p. 85. (*Sauranodonta*.)1880 E, p. 491. (*Baptanodonta*.)*Nicholson and Lydekker* 1889 A, p. 1120 (*Ichthyopterygia*); p. 1124 (*Ichthyosauria*.)*Owen, R.* 1838 B, p. 660. (*Ichthyosauri*.)1860 A, p. 159. (*Ichthyopterygia*.)1860 E, p. 198. (*Ichthyopterygia*.)1866 A. (*Ichthyopterygia*.)

- Owen, R. 1881 A. (Ichthyopterygia.)
 Quenstedt, F. A. 1852 A, p. 120. (Ichthyosauri.)
 1885 A, p. 194. (Ichthyosauri.)
 Rohon, J. V. 1899 B, p. 13. ("Ichthyosaurier.")
 Seeley, H. G. 1891 A. (Ichthyosauria.)

- Seeley, H. G. 1892 B, p. 119. (Ichthyosauria.)
 1900 A, p. 645. (Ichthyosauria.)
 Steinmann and Döderlein 1890 A, p. 640. (Ichthyopterygia.)
 Woodward, A. S. 1898 B, p. 176. (Ichthyopterygia.)
 Zittel, K. A. 1890 A, p. 451. (Ichthyosauria.)

PROTEOSAURIDÆ nom. nov.

This family has hitherto borne the name *Ichthyosauridæ*. The revival of the generic name *Proteosaurus* for the genus hitherto called *Ichthyosaurus*, requires a corresponding change in the family name. The following writers employ the name *Ichthyosauridæ*.

- Bauer, F. 1898 A, p. 283.
 1900 A, p. 574.
 Baur, G. 1887 D.

- Dames, W. 1895 B, p. 1045.
 Fraas, E. 1891 A.
 1892 B.
 Fürbringer, M. 1900 A, p. 627.
 Günther, A. C. 1886 A, p. 442.
 Kiprijanoff, W. 1881 A.
 Lydekker, R. 1889 F, p. 6.
 Nicholson and Lydekker 1889 A, p. 1124.
 Steinmann and Döderlein 1890 A, p. 642.

PROTEOSAURUS Home. Type *Ichthyosaurus platyodon* Conybeare.

Home, E. 1819 A.

Unless otherwise indicated, this genus is referred to by the following writers under the name *Ichthyosaurus*. *Proteosaurus*, however, clearly has priority. On this point see R. Lydekker in his "Catalogue Fossil Reptilia," pt. ii, p. vii. Although no species of this genus has as yet been, with certainty, discovered in America, a knowledge of its structure is essential in understanding the genus *Baptanodon*; hence citations of the literature are given.

- Bauer, F. 1898 A, p. 283.
 1900 A, p. 574.
 Baur, G. 1886 H.
 1887 A, p. 491.
 1887 D.
 1887 F.
 1889 F, p. 467.
 1895 B.
 Buckland, W. 1837 A, i, p. 133; ii, pls. vii-xix.
 Coles, H. 1853 A.
 1824 A, p. 103.
 Cope, E. D. 1871 B.
 1892 Z, p. 17.
 Cuvier, G. 1834 A, x, pp. 390-444, pls. cclvi-cclx.
 Dames, W. 1893 A.
 Dollo, L. 1892 A.
 Egerton, P. G. 1837 A.
 Fraas, E. 1888 A.
 1891 A.
 1892 A.
 1892 B.
 1894 A.
 1898 A.
 Gaudry, A. 1890 C, p. 179.
 Home, E. 1819 B. (*Proteosaurus*.)
 Hulke, J. W. 1883 A.
 1892 A.
 Huxley, T. H. 1872 A, p. 208.
 Jaeger, G. F. 1828 A.
 Kiprijanoff, W. 1881 A.
 König, 1821, in Conybeare, W. D., 1821, Trans. Geol. Soc. Lond. (1), v. p. 563. (Ichthyosaurus, type *I. communis* Conybeare; not *Ichthyosaura Latreille*, 1802, Hist Nat. Rept., iv, p. 310, type *Proteus tritonius* Laur.)

- Koken, E. 1883 A, p. 737.
 Kükenthal, W. 1890 C.
 1891 C, p. 392.
 Lydekker, R. 1888 D.
 1889 F, pp. vii, 12.
 1889 I.
 1892 B.
 Maggi, L. 1898 B, figs. 1-5.
 1898 C, figs. A, D.
 Marsh, O. C. 1877 E.
 Merian, P. 1875 A.
 Moore, C. 1857 A.
 Nicholson and Lydekker 1889 A, p. 1124.
 Osborn, H. F. 1900 B, p. 116.
 Owen, R. 1838 B, p. 660.
 1840 A, p. 86.
 1840 B.
 1841 A.
 1842 A, p. 193.
 1845 B, p. 275, pls. lxxiii, lxxiiiA.
 1851 B, p. 68.
 1860 E, p. 200.
 1866 A.
 1881 A, p. 83.
 Pearce, J. C. 1846 A.
 Pictet, F. J. 1853 A, p. 531.
 Quenstedt, F. A. 1852 A, p. 120.
 1885 A, p. 195.
 Sauvage, H. E. 1887 A.
 Schulze, E. 1894 A, p. 1133.
 Seeley, H. G. 1871 A.
 1880 A.
 1892 B, p. 119.
 Steinmann and Döderlein 1890 A, p. 642.
 Thompson, D. A. W. 1886 A.
 Trautschold, H. 1879 A.
 Woodward, A. S. 1886 B.
 1888 I, p. 278.
 1898 B, p. 179, with figures.
 Zittel, K. A. 1890 A, p. 454.

Proteosaurus sp. indet.

- Belcher, E. 1856 A. (*Ichthyosaurus* sp. indet.)
 Marsh, O. C. 1896 F, p. 444. (*Ichthyosaurus*.)
 Jurassic; Exmouth Island (lat. 77° 16' N., long. 96° W.).

BAPTANODONTIDÆ.

Marsh, O. C. 1880 E, p. 491.
Baur, G. 1887 D.
 1887 F.

Haeckel, E. 1895 A, p. 340. (Baptanodontia.)
Marsh, O. C. 1879 A, p. 86. (Sauranodontidæ.)

BAPTANODON *Marsh.* Type *B. natans* *Marsh.*

Marsh, O. C. 1880 E, p. 491. (To replace Sauranodon, preoccupied.)
Bauer, F. 1898 A, p. 324.
Baur, G. 1886 F, p. 245.
 1887 D.
 1887 F.

Zittel, K. A. 1890 A, p. 473.

Baptanodon discus *Marsh.*

Cope, E. D. 1879 M. (Sauranodon.)
Hulke, J. W. 1883 A. (Sauranodon.)
Lydekker, R. 1888 D. (Syn. of Ophthalmosaurus.)
 1888 E.
 1889 F, p. 6.

Marsh, O. C. 1880 B, p. 171, figure. (Sauranodon.)
 1880 E, p. 491.

1884 F, p. 183, fig. 448.

1895 A, p. 405, fig. 1.

1897 C, p. 485, fig. 30.

Wilder, B. G. 1880 A, p. 322. (Sauranodon.)
 Jurassic; Wyoming.

Baptanodon natans *Marsh.*

Marsh, O. C. 1879 A. (Sauranodon, type *S. natans*.)

Marsh, O. C. 1879 A, p. 86. (Sauranodon.)

Cope, E. D. 1879 M, p. 271. (Sauranodon.)

Lydekker, R. 1889 F, p. 7, fig. 5.

Marsh, O. C. 1880 B, p. 169. (Sauranodon.)

1880 E, p. 491.

1895 A, p. 406, fig. 2.

1897 C, p. 486, fig. 31.

Jurassic; Wyoming.

Morse, E. S. 1880 A, p. 7.
Nicholson and Lydekker 1889 A, p. 1126.
Steinmann and Döderlein 1890 A, p. 642.
Wilder, B. G. 1880 A, p. 322. (Sauranodon.)

CHONESPONDYLUS *Leidy.* Type *C. grandis* *Leidy.*

Leidy, J. 1868 C, p. 178.
 A genus of uncertain position.

Chonespondylus grandis *Leidy.*

Leidy, J. 1868 C, p. 176.

Cope, E. D. 1869 M, p. 29. (Ichthyosaurus.)
 Triassic; Nevada.

CYMBOSPONDYLUS *Leidy.* Type *C. piscosus* *Leidy.*

Leidy, J. 1868 C, p. 178.
 A genus of very uncertain position.

Cymbospondylus petrinus *Leidy.*

Leidy, J. 1868 C, p. 178.
Cope, E. D. 1869 M, p. 30.
 Triassic; Nevada.

Cymbospondylus piscosus *Leidy.*

Leidy, J. 1868 C, p. 178.

Cope, E. D. 1869 M, p. 30.
 Triassic; Nevada.

SHASTASAURUS *Merriam.* Type *S. pacificus* *Merriam.*

Merriam, J. C. 1895 A, p. 53.
Boulenger, G. A., 1896, Zool. Record; Rept., p. 29.
 (Shastasaurus.)
Dames, W. 1895 B, p. 1048.
 The position of this genus is in doubt.

Shastasaurus pacificus *Merriam.*

Merriam, J. C. 1895 A, p. 55, figs. 1, 2.
Dames, W. 1895 B, p. 1048.
 Triassic; California.

Order SQUAMATA *Oppel.*

Oppel, M., 1811, Ordnungen der Reptilien, p. 14.
Baur, G. 1887 A, p. 482. (Streptostylica.)
 1889 F, p. 473.
 1892 B, p. 20.
 1894 A, p. 327.
 1895 A.
 1896 A.
Boulenger, G. A. 1891 A, p. 117.
 1893 A, p. 1.

Calori, L. 1894 A.
Cope, E. D. 1864 A, p. 224.
 1889 R, p. 864.
 1891 N, p. 45.
 1892 R.
 1895 C.
 1895 E.
 1898 B, pp. 56, 74.
 1900 A, pp. 160, 175.

- Cuvier, G. 1834 A, x.
 Fürbringer, M. 1900 A.
 Gray, J. E. 1837 A.
 Günther, A. C. 1867 A, p. 625.
 Haeckel, E. 1895 A, p. 340. (Lepidosauria.)
 Hay, O. P. 1899 F, p. 682.
 Lydekker, R. 1888 B, pp. viii, 248.

- Müller, J. 1831 A, p. 199.
 Nicholson and Lydekker 1889 A, p. 1137.
 Stannius, H. 1856 A. (Streptostylica.)
 Steinmann and Döderlein 1890 A, p. 644.
 Woodward, A. S. 1898 B, p. 190.
 Zittel, K. A. 1890 A, pp. 450, 602. (Lepidosauria.)

Suborder PYTHONOMORPHA Cope.

- Cope, E. D. 1869 A, p. 258.
 Ballou, W. H. 1898 A, p. 212.
 Baur, G. 1887 C, p. 99.
 Bemmelen, J. F. 1896 A, p. 333.
 Boulenger, G. A. 1891 A, p. 117.
 Cope, E. D. 1869 M, pp. 27, 29, 175.
 1870 E.
 1870 O.
 1871 B.
 1871 C, p. 400.
 1872 F, pp. 321, 327, 328.
 1872 CC.
 1874 C, p. 30.
 1875 E, pp. 113, 264, pl. xxxvi.
 1878 G.
 1879 A, p. 36.
 1885 G, p. 246.
 1887 S, p. 334.
 1891 N, pp. 45, 50.
 1892 Z, p. 19.
 1895 C, p. 858.
 1895 E, p. 1004.

- Cope, E. D. 1896 A.
 1898 B, p. 75.
 Dana, J. B. 1896 A, p. 870.
 Fürbringer, M. 1900 A, pp. 271, 615, 622. (Mosasauria.)
 Gadow, H. 1898 A, p. 24.
 Gaudry, A. 1892 A.
 Haeckel, E. 1895 A, p. 349.
 Hoffmann, C. K. 1890 B, p. 1320. (Mosasauria.)
 Huxley, T. H. 1872 A, p. 197. (Mosasauria.)
 Lydekker, R. 1888 B, p. 261.
 Marsh, O. C. 1877 E. (Mosasauria.)
 Merriam, J. C. 1894 A.
 Nicholson and Lydekker 1889 A, p. 1143.
 Osborn, H. F. 1899 I, p. 159.
 1900 A, p. 1. ("Mosasaurs.")
 Owen, R. 1878 B, p. 755.
 Steinmann and Döderlein 1890 A, p. 645.
 Williston, S. W. 1898 E, p. 170. (Mosasauria.)
 Williston and Case 1892 A.
 Woodward, A. S. 1898 B, p. 191, with figures.
 Zittel, K. A. 1890 A, p. 611.

MOSASAURIDÆ.

- Baur, G. 1890 A.
 1890 B.
 1892 B.
 Cope, E. D. 1869 A, p. 258.
 1869 M, pp. 182, 183.
 1878 G.
 1895 C.
 Dollo, L. 1882 A.
 1885 B.
 1885 C.
 1888 D.
 1890 A.
 1893 B.
 Fürbringer, M. 1900 A.
 Gaudry, A. 1890 C, p. 202.

- Lydekker, R. 1888 B, p. 261.
 Marsh, O. C. 1872 F.
 1880 A.
 Merriam, J. C. 1894 A.
 Nicholson and Lydekker 1889 A, p. 1143.
 Owen, R. 1877 A.
 1878 B.
 1879 B.
 1880 A, p. 177.
 Quenstedt, F. A. 1885 A, p. 189. (Mosasauri.)
 Thévenin, A. 1896 A.
 Williston, S. W. 1891 A.
 1897 F.
 1898 E.
 Williston and Case 1892 A, p. 16.

MOSASAURINÆ.

- Williston, S. W. 1897 F, pp. 177, 181.
 Cope, E. D. 1869 A, p. 258. (Clidastidæ.)
 1869 M, p. 182. (Clidastidæ.)

- Marsh, O. C. 1876 G, p. 59. (Edestosauridæ.)
 Williston, S. W. 1898 E, pp. 91, 195.

MOSASAURUS Conybeare. Type *M. belgicus* Holl.

- Conybeare, 1822, in Parkinson's *Introduct. Study*
 Foss. Organ. Remains, p. 198.
 Ballou, W. H. 1898 A, p. 212.
 Baur, G. 1892 B.
 Buckland, W. 1837 A, ii. p. 167, pl. xx.
 Charlesworth, E. 1846 A.
 Cope, E. D. 1869 A, p. 260.
 1869 K, p. 85.

- Cope, E. D. 1869 M, pp. 185, 186, fig. 47.
 1874 C, p. 31.
 1875 E, p. 128.
 1878 G.
 Cuvier, G. 1808 A, p. 145. ("Animal de Maestricht.")
 1834 A, x, pp. 119-175, pls. cclvi-cclviii
 De Kay, J. E. 1830 A.

- Dollo, L. 1882 A, p. 56.
 1888 D.
 1890 A.
 1893 A. (*Leiodon*, a synonym.)
 1893 B. (Syn. of *Plioplatecarpus*.)
- Gaudry, A. 1890 A, p. 202.
 1892 A, p. 10.
- Gibbes, R. W. 1850 A.
 1851 A. (*Mosasaurus*, *Holcodus*; *Amphoro-*
steus, type *A. brumbyi*.)
- Goldfuss, A. 1845 A.
- Harlan, R. 1834 B, p. 81.
 1835 J.
 1839 A. (*Batrachiosaurus*.)
 1839 B, p. 90. (*Batrachiotherium*.)
- Holmes, F. S. 1849 A, p. 197.
- Leidy, J. 1857 E.
 1859 D.
 1865 A, p. 30 (*Mosasaurus*); p. 118 (*Baseodon*,
 type *B. reversus*=*M. dekayi*).
 1873 B, p. 270.
- Lippincott, J. S. 1881 A.
- Lydekker, R. 1888 B, p. 261.
- Merriam, J. C. 1894 A.
- Meyer, H. 1860 C.
 1860 D, p. 98.
- Nicholson and Lydekker 1889 A, p. 1144.
- Owen, R. 1842 A, p. 144.
 1845 B, p. 258.
 1851 B, p. 29.
 1877 A.
- Pictet, F. J. 1853 A, p. 504 (*Mosasaurus*); p. 506
 (*Batrachiosaurus*, *Batrachiotherium*.)
- Quenstedt, F. A. 1852 A, p. 116.
 1885 A, p. 189.
- Steinmann and Döderlein 1890 A, p. 646.
- Thévenin, A. 1896 A.
 1896 B.
- Williston, S. W. 1897 F.
 1898 E, p. 195.
- Woodward, A. S. 1898 B, p. 194, with figure-
 Zittel, K. A. 1890 A, p. 519.
- Mosasaurus brumbyi** (Gibbes.)
Gibbes, R. W. 1851 A, p. 10, pl. iii, figs. 10-16.
 (*Amphoroosteus*.)
Cope, E. D. 1869 A, p. 264.
 1869 M, pp. 198, and ii.
 1870 O, p. 576.
 1871 D, p. 411.
 1875 E, p. 270.
- Gibbes, R. W.* 1850. (Name only.)
Leidy, J. 1865 A, pp. 37, 118. (*Amphoroosteus*.)
Lydekker, R. 1888 B, p. 267. (*Liodon*.)
 Cretaceous (Rotten limestone); Alabama.
- Mosasaurus carolinensis** Gibbes.
Gibbes, R. W. 1851 A, p. 8, pl. ii, figs. 1-3.
Cope, E. D. 1869 M, p. 193. (Syn. ? of *M. dekayi*.)
 1875 E, p. 269. (Syn. ? of *M. dekayi*.)
Gibbes, R. W. 1850 A. (No description.)
Leidy, J. 1865 A, pp. 32, 117. (Syn. of *M. mitchellii*.)
 Cretaceous; South Carolina.
- Mosasaurus copeanus** Marsh.
Marsh, O. C. 1869 B, p. 393.
- Cope, E. D.* 1869 M, p. 198.
 1875 E, p. 270.
Marsh, O. C. 1872 F, p. 455.
 Cretaceous (Green-sand No. 4); New Jersey.
- Mosasaurus couperi** Gibbes.
Gibbes, R. W. 1851 A, p. 7, pl. ii, figs. 4, 5.
Cope, E. D. 1869 M, p. 193. (Syn. ? of *M. dekayi*.)
 1875 E, p. 269. (Syn. ? of *M. dekayi*.)
Gibbes, R. W. 1850 A. (No description.)
Leidy, J. 1865 A, pp. 32, 117. (Syn. of *M. mitch-*
illii.)
 Cretaceous; Georgia.
- Mosasaurus crassidens** Marsh.
Marsh, O. C. 1870 F.
Cope, E. D. 1869 M, p. 198.
 1875 E, p. 270.
 1875 V, p. 41.
 Cretaceous; North Carolina.
- Mosasaurus dekayi** Bronn.
Bronn, H. G. 1838 A, p. 760.
Cope, E. D. 1867 E, p. 27. (*M. mitchilli*.)
 1869 A, p. 262. (*M. mitchilli*.)
 1869 B, p. 733 (*M. mitchilli*); p. 734 (*Baseodon*
reversus).
 1869 K, p. 86. (*M. mitchilli*.)
 1869 M, pp. 193, 235, (?) pl. xi, fig. 8; text
 figs. 48, 49.
 1875 E, p. 269, pl. xxxvii, fig. 16.
 1895 C, p. 859, pl. xxxi, figs. 2, 2a.
De Kay, J. E. 1830 A, p. 135. (*Mosasaurus* sp.)
 1842 A, p. 28, pl. xxii, figs. 57, 58. (*M. major*.)
Emmons, E. 1858 B, p. 217, figs. 36A, 37. (*M. max-*
imiliani.)
Gibbes, R. W. 1850 A.
 1851 A, p. 8, pl. i, figs. 2, 6.
Harlan, R. 1835 J. ("Saurian reptile.")
Leidy, J. 1865 A, p. 116, plates referred to, in part
 (*M. mitchilli*); p. 118, pl. x, figs. 14, 15 (*Baseodon*
reversus.)
 1865 D, p. 70, in part.
Mitchill, S. L. 1818 A, pp. 384, 385, 431, pl. viii,
 fig. 4. ("Saurian.")
Morton, S. G. 1844 B, p. 132. (*M. occidentalis*;
 no description.)
Owen, R. 1849 A, p. 382, pl. x, fig. 5. (*M. maxi-*
miliani.)
 Cretaceous; New Jersey, South Carolina?.
- Mosasaurus depressus** Cope.
Cope, E. D. 1869 A, p. 262.
 1869 B, p. 734.
 1869 C.
 1869 M, pp. 189, 196, pl. xi, fig. 6, text fig. 48.
 1875 E, p. 269, pl. xxxvii, fig. 12.
 Cretaceous; New Jersey.
- Mosasaurus fulciatus** Cope.
Cope, E. D. 1869 M, p. 194.
 1870 E.
 1875 E, p. 269, pl. xxxvii, fig. 13.
 Cretaceous; New Jersey.

Mosasaurus horridus Williston.

- Williston, S. W. 1898 E, pp. 103, 110, 115, 145, 147, 150, 152, 154, pls. xix-xxi; pl. xxxii.
 Ballou, W. H. 1898 A, p. 217.
 Williston, S. W. 1897 D, p. 95. (No description.)
 Cretaceous (Niobrara); Kansas.

Mosasaurus maximus Cope.

- Cope, E. D. 1869 A, p. 262.
 1869 M, pp. 188, 189, pl. xi, fig. 7; text figs. 48, 49.
 1870 R, p. 86.
 1875 E, p. 269, pl. xxxvii, fig. 15.
 Marsh, O. C. 1869 B, p. 393.
 Whitfield, R. P. 1900 A, p. 25, pls. iv, v.
 Cretaceous; New Jersey.

Mosasaurus miersii Marsh.

- Marsh, O. C. 1869 B, p. 395.
 Cope, E. D. 1869 M, p. 199.
 1875 E, p. 270.
 Cretaceous; New Jersey.

Mosasaurus minor Gibbes.

- Gibbes, R. W. 1851 A, p. 7, pl. i, figs. 3-5.
 Cope, E. D. 1869 A, p. 261.
 1869 M, pp. 186, 189, 198.
 1875 E, p. 270. (Syn.? of *M. acutidens* = *Holcodus acutidens*.)
 Gibbes, R. W. 1850 A. (No description.)
 Leidy, J. 1865 A, p. 118. (*Holcodus acutidens*.)
 Cretaceous; Alabama.

Mosasaurus missouriensis (Harlan).

- Harlan, R. 1834 D, p. 405, pl. xx. (*Ichthyosaurus*.)
 Baur, G. 1892 B, p. 9. (*M. maximiliani*.)
 Cope, E. D. 1869 A, p. 263.
 1869 K, p. 86.
 1869 M, pp. 189, 195.
 1871 D, p. 401.
 1875 E, pp. 219, 269.
 Gibbes, R. W. 1850 A. (*M. maximiliani*.)
 1851 A, p. 6, pl. i, fig. 7. (*M. maximiliani*.)

CLIDASTES Cope. Type *C. iguanavus* Cope.

- Cope, E. D. 1868 H, p. 181. (*Clidastes*; *Nectoporus*, type *N. validus* Cope.)
 1868 K, p. 233.
 1869 A.
 1869 M, p. 211, figs. 50-52.
 1871 D, p. 412.
 1871 N, p. 266.
 1872 F, pp. 322, 330.
 1874 C, p. 31.
 1875 E, pp. 128, 130, pl. lv.
 1878 G.
 Dollo, L. 1885 C, p. 29 (*Edestosaurus*); p. 30 (*Clidastes*).
 Lydekker, R. 1888 B, p. 272.
 Marsh, O. C. 1871 B, p. 447. (*Edestosaurus*, type *E. dispar* Marsh.)
 1872 C, p. 291. (*Edestosaurus*.)
 1872 F, p. 463. (*Edestosaurus*.)
 1872 T, p. 496. (*Edestosaurus*, *Clidastes*.)
 Merriam, J. C. 1894 A, p. 31.
 Nicholson and Lydekker 1889 A, p. 1143.

- Goldfuss, A. 1845 A, pls. vi-ix. (*M. maximiliani*.)
 1848, Versamml. deutsch. Naturf., Mainz, p. 141. (*M. neovidii*.)
 Harlan, R. 1834 A. (*Ichthyosaurus missouriensis*; no description.)

- 1834 B, p. 80. (*Ichthyosaurus*.)
 1834 D, p. 405, pl. xxx, figs. 3-8. (*Ichthyosaurus*.)
 1834 E. (*Ichthyosaurus*.)
 1835 B, p. 284. (*Ichthyosaurus*.)
 1835 E. (*Ichthyosaurus*.)
 1839 A. (" *Batrachiosaurus*.")
 1839 B. (" *Batrachotherium*.")
 1839 C. (*Batrachiosaurus*.)
 1842 B, p. 142. (*Batrachiotherium*.)
 Hoffman, C. K. 1890 B, p. 1320. (*M. maximiliani*.)
 Leidy, J. 1865 A, p. 117, pl. vii, figs. 15-18; pl. viii, figs. 6, 8; pl. x, figs. 18, 19; pl. xvii, figs. 12, 13. (Determinations doubtful.)
 Meyer, H. 1845 B, p. 313. (*M. maximiliani*, *M. missouriensis*.)
 Pictet, F. J. 1853 A, p. 505. (*M. maximiliani*.)
 Quenstedt, F. A. 1852 A, p. 118.
 Zittel, K. A. 1890 A, p. 621. (*M. maximiliani*.)
 Cretaceous; Nebraska.

Mosasaurus oarthrus Cope.

- Cope, E. D. 1869 M, pp. 189, 196.
 1870 E.
 1875 E, p. 269, pl. xxxvii, fig. 17.
 Cretaceous; New Jersey.

Mosasaurus princeps Marsh.

- Marsh, O. C. 1869 B, p. 392.
 Baur, G. 1892 B, p. 4.
 Cope, E. D. 1869 M, pp. 188, 192.
 1875 E, p. 269. (Syn. *M. dekayi*.)
 Cretaceous; New Jersey.

Mosasaurus sp. indet.

- Leidy, J. 1865 A, pp. 45, 118, pl. viii, figs. 9, 10.
 1873 B, pp. 279, 343, pl. xxxvi, fig. 15.
 Harlan, R. 1835 B, p. 285.

Owen, R. 1877 A.

Steinmann and Döderlein 1890 A, p. 646.

Williston, S. W. 1891 A.

- 1893 C.
 1897 E.
 1897 F.
 1897 J, p. 107.
 1898 A, figure.
 1898 E, p. 195.

Williston and Case 1892 A, p. 17.

Woodward, A. S. 1898 B, p. 195. (*Edestosaurus*.)

Zittel, K. A. 1890 A, p. 623 (*Clidastes*); p. 624 (*Edestosaurus*).

Clidastes cinerearum Cope.

- Cope, E. D. 1870 O, p. 583.
 1871 D, p. 413.
 1871 N, p. 266.
 1872 F, pp. 322, 330.
 1875 E, pp. 48, 137, 266, pl. xxi, figs. 14-17.
 1877 G, p. 583.

- Marsh, O. C. 1871 B, p. 449.
 Williston, S. W. 1891 A. (Syn.? of *C. velox*.)
 1898 E, p. 198.
 Williston and Case 1892 A, p. 17.
 Cretaceous (Niobrara); Kansas.

Clidastes conodon Cope.

- Cope, E. D.* 1881 R.
 Cretaceous; New Jersey.

Clidastes dispar (Marsh).

- Marsh, O. C.* 1871 B, p. 447. (Edestosaurus.)
Cope, E. D. 1871 N, p. 269. (Edestosaurus.)
 1872 F, p. 330. (Edestosaurus.)
 1872 CC, p. 141. (Edestosaurus.)
 1874 C, p. 33.
 1875 E, p. 266.
 1877 G, p. 583.
 Fürbringer, M. 1900 A, p. 272.
Marsh, O. C. 1872 F, p. 463, pl. xi. (Edestosaurus.)
 1880 A, p. 86, pl. i. (Edestosaurus.)
 Owen, R. 1880 A, pl. viii, fig. 1. (Edestosaurus.)
 Williston, S. W. 1891 A.
 1898 E, pp. 198, 201. (*C. velox* in part; *C. tortor* in part.)
 Williston and Case 1892 A, pp. 17, 30.
 Woodward, A. S. 1898 B, p. 193, fig. 117.
 Zittel, K. A. 1890 A, p. 617, fig. 549.
 Cretaceous (Niobrara); Kansas.

Clidastes iguanavus Cope.

- Cope, E. D.* 1868 H.
 1868 K, p. 233.
 1869 A, p. 258.
 1869 B, p. 734.
 1869 K, p. 86.
 1869 M, p. 220, pl. v, fig. 3.
 1872 F, p. 330.
 1875 E, pp. 138, 266.
Marsh, O. C. 1871 B, p. 449.
 Cretaceous; New Jersey.

Clidastes intermedius Leidy.

- Leidy, J.* 1870 E, p. 4.
Cope, E. D. 1869 M, p. 221.
 1871 D, p. 412.
 1875 E, pp. 136, 267.
Marsh, O. C. 1871 B, p. 451.
Leidy, J. 1873 B, pp. 281, 344, pl. xxxiv, figs. 1-5.
 Cretaceous; Alabama.

Clidastes liodontus Merriam.

- Merriam, J. C.* 1894 A, p. 35.
 Williston, S. W. 1898 E, p. 204.
 Cretaceous; Kansas.

Clidastes propython Cope.

- Cope, E. D.* 1869 D.
 1869 A, p. 258.
 1869 M, p. 221, pl. xii, figs. 1-21.
 1871 B, figs. 15, 19.
 1875 E, p. 265, pl. xxxvii, fig. 1.
 1878 G, p. 303.
 Dana, J. D. 1876 A, p. 65.
Marsh, O. C. 1871 B, p. 451.
 Zittel, K. A. 1890 A, p. 623, figs. 545, 547, 548, 553.
 Cretaceous; Alabama.

Clidastes pumilis Marsh.

- Marsh, O. C.* 1871 G, p. 104.

- Cope, E. D.* 1871 N, p. 266.

1872 F, pp. 323, 330.

1874 C, p. 34.

1875 E, pp. 48, 266.

- Marsh, O. C.* 1871 B, p. 452.

Merriam, J. C. 1894 A, p. 35.

Williston, S. W. 1898 E, p. 198. (Syn. of *C. velox*.)

Williston and Case 1892 A, p. 17. (Syn. of *C. velox*.)

Cretaceous (Niobrara); Kansas.

It seems not improbable that this species will yet prove to be the young of *C. velox*.

Clidastes rex (Marsh).

- Marsh, O. C.* 1872 F, p. 460, pl. xii. (Edestosaurus.)
Cope, E. D. 1874 C, p. 33.
 1875 E, p. 266.
Marsh, O. C. 1897 C, p. 527. (Edestosaurus.)
Williston, S. W. 1898 E, p. 201. (Syn. of *C. tortor*.)
Williston and Case 1892 A, pp. 17, 30.
 Cretaceous (Niobrara); Kansas.

Clidastes stenops Cope.

- Cope, E. D.* 1871 N, p. 268. (Edestosaurus.)
 1872 F, p. 330. (Edestosaurus.)
 1874 C, p. 33.
 1875 E, pp. 133, 266, pls. xiv, fig. 2; pl. xvii, figs. 7, 8; pl. xviii, figs. 1-5; pl. xxxvi, fig. 4; pl. xxxvii, figs. 1-3; pl. xxxviii, fig. 3.
 1878 G, p. 299.
Marsh, O. C. 1872 F, p. 464. (Edestosaurus.)
Williston, S. W. 1898 E, p. 197.
Williston and Case 1892 A, pp. 17, 30.
 Zittel, K. A. 1890 A, p. 613, fig. 541.
 Cretaceous (Niobrara); Kansas.

Clidastes tortor Cope.

- Cope, E. D.* 1871 N, pp. 265, 266. (Edestosaurus.)
 1872 F, pp. 322, 330. (Edestosaurus.)
 1872 CC, p. 141. (Edestosaurus.)
 1874 C, p. 33.
 1875 E, pp. 48, 131, 265, pl. xiv, fig. 1; pl. xvi, figs. 1, 6; pl. xvii, fig. 1; pl. xix, figs. 1-6; pl. xxxvi, fig. 3; pl. xxxvii, fig. 2; pl. xxxviii, fig. 2.
 1877 G, p. 583.
Marsh, O. C. 1872 F, p. 464. (Edestosaurus.)
Merriam, J. C. 1894 A, p. 34. (*C. medius*.)
Williston, S. W. 1897 D, p. 97.
 1898 E, p. 201, pl. xxiii; pl. xxvii, fig. 2; pl. xxxviii, fig. 6; pl. xxxix, fig. 2; pl. xxxvii; pl. xxxviii; pl. xxxix; pl. xlii, figs. 5, 6; pl. xlvii; pl. liv, figs. 4, 5; pl. lx, fig. 5; pl. lxiv, fig. 1.
Williston and Case 1892 A, p. 17.
 Cretaceous (Niobrara); Kansas.

Clidastes ? validus Cope.

- Cope, E. D.* 1868 H, p. 181. (Nectoporthus.)
 1869 A, p. 260. (Macrosaurus.)
 1869 B, p. 734. (Macrosaurus.)
 1869 K, p. 86. (Macrosaurus.)
 1869 M, p. 208. (*Liodon validus*, in part); pl. v, fig. 5, (*Macrosaurus validus*); p. v, expl. of pl. v (*Clidastes antivalidus*, based on type vertebra of *Nectoporthus validus*).
 1871 D, p. 414. (*C. antivalidus*.)
 Cretaceous; New Jersey.

Clidastes velox (Marsh).

- Marsh, O. C. 1871 B, p. 450. (Edestosaurus.)
 Ballou, W. H. 1898 A, p. 215, fig. 221.
 Cope, E. D. 1871 N, p. 269. (Edestosaurus.)
 1872 F, p. 330. (Edestosaurus.)
 1874 C, p. 33. (C. affinis, C. velox.)
 1875 E, p. 266. (C. velox, C. affinis.)
 Leidy, J. 1873 B, pp. 283, 344, pl. xxxiv, figs. 6-11.
 (C. affinis.)
 Marsh, O. C. 1872 F, p. 464. (Edestosaurus.)
 Merriam, J. C. 1894 A, p. 34, pl. i, fig. 4; pl. iii,
 figs. 6, 7, 9, 10.
 Williston, S. W. 1891 A.
 1893 C, pl. iii.
 1897 J, p. 110.
 1898 E, pls. x-xii; pl. xxiv, figs. 6, 7; pl.
 xxvii, figs. 3, 4; pl. xxviii, figs. 1-4; pl.
 xxxi, fig. 6; pl. xxxiii; pl. xxxiv; pl. xl,
 figs. 6, 7; pl. lxii, fig. 3; pl. lxxii, fig. 1.
 (Includes, besides C. velox (Marsh) also C.
 pumilis Marsh, C. affinis Leidy, and C.
 dispar (Marsh).)

Williston and Case 1892 A, p. 17, pls. ii, iii.
 Cretaceous (Niobrara); Kansas.

Clidastes westii Williston and Case.

- Williston, S. W. 1892 A, p. 29, pls. iv-vi.
 1898 E, p. 205, pl. xxiii; pl. xxvii, fig. 1; pl.
 xxxv; pl. xxxvi; pl. xxxix; pl. liii.
 Cretaceous (Pierre); Kansas.

Clidastes wymani Marsh.

- Marsh, O. C. 1871 G, p. 104.
 Cope, E. D. 1871 N, p. 266.
 1872 F, p. 330.
 1874 C, p. 33. (C. wymanii.)
 1875 E, p. 266. (C. wymanii.)
 Marsh, O. C. 1871 B, p. 451.
 1872 F, p. 464. (Edestosaurus.)
 Williston, S. W. 1898 E, p. 203.
 Williston and Case 1892 A, pp. 17, 30.
 Cretaceous (Niobrara); Kansas.

BAPTOSAURUS Marsh. Type *Halisaurus platyspondylus* Marsh.

- Marsh, O. C. 1870 F. (To replace Halisaurus, pre-
 occupied by Halosaurus Günther.)
 Cope, E. D. 1869 M, pp. 185, 208.
 1874 C, p. 31.
 1875 E, pp. 128, 272.
 Dollo, L. 1885 C, p. 28.
 Marsh, O. C. 1869 B, p. 395. (Halisaurus, type *H.*
platyspondylus)
 Merriam, J. C. 1894 A, p. 36.
 Nicholson and Lydekker 1889 A, p. 1142.
 Williston, S. W. 1897 F.
 1897 H, p. 244.
 1897 J, p. 107.
 1898 E, p. 207.
 Zittel, K. A. 1890 A, p. 624.
 The systematic position of this genus is
 doubtful.

Baptosaurus fraternus Marsh.

- Marsh, O. C. 1869 B, p. 397. (Halisaurus.)
 Cope, E. D. 1869 M (1870), p. 210.
 1875 E, p. 272.

Marsh, O. C. 1870 F.
 Cretaceous; New Jersey.

Baptosaurus onchognathus Merriam.

- Merriam, J. C. 1894 A, p. 37, pl. iv, fig. 9.
 Williston, S. W. 1898 E, p. 208, pl. xxv, fig. 6; pl.
 xli, fig. 3.
 Cretaceous (Niobrara); Kansas.

Baptosaurus platyspondylus Marsh.

- Marsh, O. C. 1869 B, p. 395. (Halisaurus.)
 Cope, E. D. 1869 M (1870), p. 209.
 1875 E, p. 272.
 Marsh, O. C. 1869 B, p. 395. (Halisaurus.)
 1870 F.
 Cretaceous; New Jersey.
 This species is said to have been described
 at the Salem meeting of the Amer. Assoc. Adv.
 Sci., 1869, under the name *Macrospandylus*
platyspondylus, but the name does not occur in
 the "Proceedings."

PLATECARPINÆ.

Williston, S. W. 1897 F, pp. 177, 181.

| Williston, S. W. 1898 E, pp. 91, 177.

SIRONECTES Cope. Type *S. anguliferus* Cope.

- Cope, E. D. 1874 C, pp. 31, 34.
 1875 E, pp. 128, 139, 267.
 Dollo, L. 1885 C, p. 30.
 Nicholson and Lydekker 1889 A, p. 1144.
 Williston, S. W. 1897 H, p. 245.
 1897 J, p. 107.
 Zittel, K. A. 1890 A, p. 624.

Sironectes anguliferus Cope.

- Cope, E. D. 1874 C, pp. 31, 34.
 1875 E, pp. 139, 267, pl. xxiii, figs. 16-18; pl.
 xxiv, figs. 1-15.
 Williston, S. W. 1898 E, pp. 188, 194. (? Platecar-
 pus planifrons.)
 Cretaceous (Niobrara); Kansas.

HOLCODUS Gibbes. Type *H. acutidens* Gibbes.

- Gibbes, R. W. 1851 A, p. 9.
 Cope, E. D. 1869 M, pp. 185, 199.
 1871 N, p. 269.
 1872 F, p. 381.
 1872 CC, p. 141.
 Leidy, J. 1865 A, p. 118. (In part).
 Marsh, O. C. 1872 C, p. 291.
 1872 F, p. 455. (Syn.? of *Mosasaurus*.)
 Williston, S. W. 1897 F, p. 184. (= ? *Platecarpus*.)
 1898 E, p. 178. (= ? *Platecarpus*.)
 Zittel, K. A. 1890 A, p. 620. (Syn. of *Mosasaurus*.)

Holcodus acutidens Gibbes.

- Gibbes, R. W. 1851 A, p. 9, pl. iii, figs. 6-9; not fig. 13.

- Cope, E. D. 1869 M, pp. 200, 210.
 1872 CC, p. 141.
 1875 E, p. 270. (*Mosasaurus*.)
 Gibbes, R. W. 1850 A. (*H. columbiensis*; no description.)
 Leidy, J. 1865 A, p. 118 (in part), pl. x, fig. 17.
 Marsh, O. C. 1869 B, p. 394.
 Williston, S. W. 1898 E, p. 178. (*Platecarpus* ?)
 Zittel, K. A. 1890 A, p. 623.
 Cretaceous; Mississippi.

PLATECARPUS Cope. Type *P. tympaniticus* Cope.

- Cope, E. D. 1869 A, p. 264.
 Most of the authorities named below include in this genus also the species placed in this work in the genus *Lestosaurus* Marsh.
 Cope, E. D. 1869 M, pp. 185, 199.
 1872 CC, p. 141.
 1874 C, pp. 31, 34.
 1875 E, pp. 128, 141, 266.
 1878 G. (In part).
 Leidy, J. 1865 A, p. 118. (*Holcodus*, in part.)
 Lydekker, R. 1888 B, p. 269.
 Merriam, J. C. 1894 A.
 Nicholson and Lydekker 1889 A, p. 1144.
 Owen, R. 1877 A.
 Steinmann and Döderlein 1890 A, p. 646.
 Thévenin, A. 1896 B.

- Williston, S. W. 1891 A.
 1897 E.
 1898 E.
 Woodward, A. S. 1898 B, p. 194.
 Zittel, K. A. 1890 A, p. 622.
Platecarpus tympaniticus Cope.
 Cope, E. D. 1869 A, p. 265.
 1869 M, p. 200.
 1874 C, p. 35.
 1875 E, p. 267, pl. xxxvii, fig. 11.
 Leidy, J. 1865 A, p. 118 (in part), pl. vii, figs. 4-7; pl. xi, fig. 14. (? *Holcodus acutidens*.)
 Williston, S. W. 1897 F, p. 178.
 1898 E, p. 179.
 Cretaceous; Mississippi.

LESTOSAURUS Marsh. Type *L. sinus* Marsh.

- Marsh, O. C. 1872 F, p. 454.
 Baur, G. 1892 B. (*Platecarpus*.)
 Cope, E. D. 1872 CC, p. 141. (*Lestosaurus*.)
 1874 C, pp. 31, 34. (*Platecarpus*.)
 1875 E, pp. 128, 141, 266 (*Platecarpus*.)
 1878 G. (*Platecarpus*.)
 Dollo, L. 1885 C, p. 23 (*Lestosaurus*); p. 29 (*Platecarpus*.)
 Lydekker, R. 1888 B, p. 269. (*Platecarpus*.)
 Marsh, O. C. 1872 T, p. 497.
 1880 A, p. 84.
 Merriam, J. C. 1894 A. (*Platecarpus*.)
 Nicholson and Lydekker 1889 A, p. 1144. (*Platecarpus*.)
 Osborn, H. F. 1899 D. (*Platecarpus*.)
 Owen, R. 1877 A. (*Platecarpus*.)
 Steinmann and Döderlein 1890 A, p. 646. (*Platecarpus*.)
 Williston, S. W. 1891 A. (*Platecarpus*.)
 1897 F. (*Platecarpus*.)
 1897 J, p. 108. (*Platecarpus*.)
 1898 E. (*Platecarpus*.)
 1898 H, p. 235. (*Platecarpus*.)
 1899 A, p. 40. (*Platecarpus*.)
 Zittel, K. A. 1890 A, p. 622 (*Platecarpus*.)

Lestosaurus clidastoides (Merriam).

- Merriam, J. C. 1894 A, p. 30. (*Platecarpus*.)
 Williston, S. W. 1898 E, p. 190. (*Platecarpus*.)
 Cretaceous; Kansas.

Lestosaurus coryphæus (Cope).

- Cope, E. D. 1871 N, p. 269. (*Holcodus*.)
 Ballou, W. H. 1898 A, pp. 216, 223, figure. (*Platecarpus*.)
 Baur, G. 1892 B, pls. i, ii. (*Platecarpus*.)
 Cope, E. D. 1872 F, pp. 322, 331. (*Holcodus*.)
 1874 C, p. 35. (*Platecarpus*.)
 1875 E, pp. 47, 142, pl. xv, fig. 1; pl. xvi, fig. 3; pl. xvii, fig. 6; pl. xx, figs. 4-7; pl. xxi, figs. 1, 2; pl. xxxvi, fig. 6; pl. xxxvii, fig. 9. (*Platecarpus*.)
 Fürbringer, M. 1900 A, p. 272. (*Platecarpus*.)
 Leidy, J. 1873 B, pp. 276, 344, pl. xxxiv, figs. 12-14; pl. xxxvi, figs. 4-14.
 Marsh, O. C. 1872 F, pp. 457, 461. (*Edestosaurus*.)
 Merriam, J. C. 1894 A, p. 29, pl. i, figs. 1, 2; pl. iii, figs. 3-5, 11; pl. iv, figs. 2, 8. (*Platecarpus*.)
 Osborn, H. F. 1899 D, p. 171, text figs. 2, 3. (*Platecarpus*.)
 1900 A, p. 2, fig. 1. (*Platecarpus*.)

Wagner, G. 1898 A, p. 203. (Platecarpus coryphaeus?)

Williston, S. W. 1897 J, p. 110. (Platecarpus.)

1898 E, pp. 103, 145, 149, 153, 160, 186, pls. xiii-xv; pl. xxii, fig. 2; pl. xxiv, figs. 1-5; pl. xxv, figs. 1-5; pl. xxvi; pl. xxvii, fig.; pl. xxviii, fig. 5; pl. xxix, figs. 3-5; pl. xxxi, figs. 1-5; pl. xlii figs. 3, 4; pl. xlii, figs. 1-4; pl. i; pl. lii; pl. liv. figs. 2, 3; pl. lv; pl. lvi; pl. lvii, figs. 4-10; pl. lviii; pl. lx, fig. 3; pl. lxi, fig. 3; pl. lxiii; pl. lxiv, fig. 2; pl. lxxii, fig. 2. (Platecarpus.)

1899 A, p. 39, pl. xii. (Platecarpus.)

Woodward, A. S. 1898 B, p. 193, fig. 117.

Cretaceous (Niobrara, Pierre?); Kansas.

Lestosaurus crassartus (Cope).

Cope, E. D. 1871 N, p. 278. (Liodon.)

1872 F, p. 332. (Liodon.)

1872 CC, p. 141. (Liodon.)

1874 C, p. 36. (Platecarpus.)

1875 E, pp. 153, 268, pl. xxvi, figs. 4-12. (Platecarpus.)

Marsh, O. C. 1872 F, p. 462. (Liodon.)

Williston, S. W. 1898 E, p. 180, pl. xiv, figs. 3, 4. (Platecarpus?).

Cretaceous (Pierre); Colorado.

Lestosaurus curtirostris (Cope).

Cope, E. D. 1871 N, p. 273. (Liodon.)

1871 A. (Liodon; no description.)

1872 F, p. 331. (Liodon.)

1872 CC, p. 141. (Liodon.)

1874 C, p. 36. (Platecarpus.)

1875 E, pp. 150, 268, pl. xiv, fig. 3; pl. xv, fig. 3; pl. xvi, figs. 4, 5; pl. xvii, fig. 2; pl. xviii, figs. 7, 8; pl. xxi, figs. 7-13; pl. xxxvi, figs. 1, 5; pl. xxxvii, fig. 10; pl. xxxviii, fig. 1. (Platecarpus.)

Lydekker, R. 1888 B, p. 270, fig. 59. (Platecarpus.)

Marsh, O. C. 1872 F, p. 461. (Lestosaurus.)

Cretaceous (Niobrara); Kansas.

Lestosaurus felix Marsh.

Marsh, O. C. 1872 F, p. 457, pl. xiii.

Cope, E. D. 1874 C, p. 35. (Platecarpus.)

1875 E, p. 267. (Platecarpus.)

Williston, S. W. 1898 E, p. 189. (Platecarpus.)

Cretaceous (Niobrara); Kansas.

Lestosaurus glandiferus (Cope).

Cope, E. D. 1871 N, p. 276. (Liodon.)

1872 F, p. 332. (Liodon.)

1874 C, p. 36. (Platecarpus?)

1875 E, pp. 156, 268, pl. xxvi, figs. 13, 14. (Platecarpus.)

Williston, S. W. 1898 E, p. 182. (Platecarpus.)

Cretaceous (Niobrara, Pierre?); Kansas.

Lestosaurus gracilis Marsh.

Marsh, O. C. 1872 F, p. 460.

Cope, E. D. 1874 C, p. 36. (Platecarpus.)

1875 E, p. 268. (Platecarpus.)

Williston, S. W. 1898 E, p. 187. (Platecarpus.)

Cretaceous (Niobrara); Kansas.

Lestosaurus ictericus (Cope).

Cope, E. D. 1870 Q. (Liodon.)

1870 O, p. 577. (Liodon.)

1871 D, p. 406. (Liodon.)

1871 N, p. 272. (Holcodon.)

1872 F, p. 331. (Holcodon.)

1874 C, p. 35. (Platecarpus.)

1875 E, pp. 144, 267, pl. xiv, fig. 4; pl. xv, fig. 2; pl. xvii, figs. 3, 4; pl. xviii, fig. 6; pl. xix, figs. 7-10; pl. xx, figs. 1-3; pl. xxv, figs. 1-26; pl. xxxvi, fig. 7; pl. xxxvii, fig. 8. (Platecarpus.)

Marsh, O. C. 1872 F, p. 461. (Lestosaurus.)

Merriam, J. C. 1894 A, p. 30. (Platecarpus.)

Williston, S. W. 1898 E, p. 184, pls. xliii, xlv. (Platecarpus.)

Cretaceous (Niobrara); Kansas.

Lestosaurus latifrons Marsh.

Marsh, O. C. 1872 F, p. 458.

Cope, E. D. 1874 C, p. 36. (Platecarpus.)

1875 E, p. 268. (Platecarpus.)

Williston, S. W. 1898 E, p. 189. (Platecarpus.)

Cretaceous (Niobrara); Kansas.

Lestosaurus? latispinus (Cope).

Cope, E. D. 1871 J, p. 169. (Liodon.)

1871 N, p. 276. (Liodon.)

1872 F, p. 332. (Liodon.)

1874 C, p. 38. (Liodon.)

1875 E, pp. 155, 268, pl. xxvi, figs. 1-4. (Platecarpus?).

Williston, S. W. 1898 E, p. 181. (Platecarpus?).

Cretaceous (Pierre); Kansas.

Lestosaurus mudgei (Cope).

Cope, E. D. 1870 Q. (Liodon.)

1870 O, p. 581. (Liodon.)

1871 D, p. 405. (Liodon.)

1871 N, p. 273. (Holcodon.)

1872 F, p. 331. (Holcodon.)

1874 C, p. 36. (Platecarpus.)

1875 E, pp. 157, 268, pl. xvi, fig. 2; pl. xvii, fig. 5; pl. xxvi, figs. 2, 3; pl. xxxvii, fig. 7. (Platecarpus.)

Marsh, O. C. 1872 F, p. 463, pl. xlii. (Rhinosaurus.)

Williston, S. W. 1898 E, p. 186. (Platecarpus.)

Cretaceous (Niobrara); Kansas.

Lestosaurus oxyrhinus (Merriam).

Merriam, J. C. 1894 A, p. 30. (Platecarpus.)

Williston, S. W. 1898 E, p. 190. (Platecarpus.)

Cretaceous; Kansas.

Lestosaurus planifrons (Cope).

Cope, E. D. 1874 C, p. 31. (Clidastes.)

1875 E, pp. 135, 265; pl. xxii, figs. 1-7; pl. xxiii, figs. 1-15; pl. xxxv, fig. 16. (Clidastes.)

1878 G, p. 299. (Clidastes.)

Williston, S. W. 1898 E, pp. 188, 194. (Platecarpus.)

Williston and Case 1892 A, p. 17. (Clidastes.)

Cretaceous (Niobrara); Kansas.

Lestosaurus simus Marsh.

Marsh, O. C. 1872 F, p. 455, pls. x, xi.

Cope, E. D. 1874 C, p. 36. (Platecarpus.)

1875 E, p. 268. (Platecarpus.)

Marsh, O. C. 1880 A, p. 86, pl. i.

1897 C, p. 527.

Merriam, J. C. 1894 A, p. 30. (Platecarpus.)

Owen, R. 1880 A, pl. viii, figs. 2, 3.

Williston, S. W. 1898 E, p. 188, pl. xlvii. (Platecarpus.)

Woodward, A. S. 1898 B, p. 193, fig. 117.

Zittel, K. A. 1890 A, p. 622, figs. 550, 552.

Cretaceous (Niobrara); Kansas.

Lestosaurus tectulus (Cope).

Cope, E. D. 1871 N, p. 271. (Holcodus.)

1872 F, p. 331. (Holcodus.)

1874 C, p. 36. (Platecarpus.)

1875 E, pp. 159, 269; pl. xxi, figs. 3-6; pl. xxvii, figs. 5-10. (Platecarpus.)

Williston, S. W. 1898 E, p. 183. (Platecarpus.)

Cretaceous (Pierre); Kansas.

BRACHYSAURUS Willist. Type *B. overtoni* Willist.

Williston, S. W. 1897 D.

1897 F, p. 178.

1897 H, p. 246.

1898 E, p. 192.

Brachysaurus overtoni Willist.

Williston, S. W. 1897 D, p. 96, pl. viii.

1898 E, pp. 148, 192, pl. xxii; pl. xxx; pl. xi, figs. 10, 11; pl. lxii, fig. 1.

Cretaceous (Pierre); Kansas.

HOLOSAURUS Marsh. Type *H. abruptus* Marsh.

Marsh, O. C. 1880 A, p. 87.

Dollo L. 1893 C, p. 221.

Williston, S. W. 1897 H, p. 245. (Syn. of Platecarpus.)

1897 J, p. 107.

1898 E, p. 192.

Zittel, K. A. 1890 A, p. 624.

Holosaurus abruptus Marsh.

Marsh, O. C. 1880 A, p. 87.

1897 C, p. 527.

Williston, S. W. 1898 E, p. 193.

Cretaceous (Niobrara); Kansas.

TYLOSAURINÆ.

Williston, S. W. 1897 F, pp. 177, 180.

Marsh, O. C. 1876 G, p. 59. (Tylosauridæ.)

Williston, S. W. 1895 A, p. 169. (Tylosauridæ.)

1898 E, pp. 90, 171.

MACROSAURUS Owen. Type *M. lævis* Owen.

Owen, R. 1849 A, p. 382.

Cope, E. D. 1869 M, p. 200. (Syn. of Liodon.)

1875 E, p. 270. (Syn. of Liodon.)

Gibbes, R. W. 1851 A, p. 13.

Leidy, J. 1865 A, p. 74.

Zittel, K. A. 1890 A, p. 622. (Syn. of Liodon.)

Macrosaurus lævis Owen.

Owen, R. 1849 A, p. 382, pl. xi, figs. 1-6.

Cope, E. D. 1867 E, p. 26.

1869 A, p. 260.

1869 B, p. 734.

1869 M, pp. 205, in part. (Liodon.)

1875 E, p. 270. (Liodon.)

Leidy, J. 1865 A, pp. 74, 118.

1865 D, p. 70.

Owen, R. 1879 B, p. 54. (Leiodon.)

Cretaceous; New Jersey.

Macrosaurus mitchillii (De Kay).

DeKay, J. E. 1830 A, p. 140, pl. iii, figs. 3, 4. (Geosaurus.)

Cope, E. D. 1869 A, p. 261. (Mosasaurus impar.)

1869 M, pp. 193, 205. (Liodon.)

1871 G, p. 43. (Liodon.)

1875 E, p. 270. (Liodon.)

1875 V, p. 41. (Liodon.)

De Kay, J. E. 1842 A, p. 28, pl. xxii, figs. 55, 56. (Geosaurus.)

Emmons, E. 1858 B, p. 224, figs. 45, 46. (Drepanodon impar.)

Gibbes R. W. 1851 A, p. 9. (Geosaurus.)

Giebel, C. G. 1847 B, p. 134. (Geosaurus.)

Harlan, R. 1834 B, p. 82. (Geosaurus.)

1835 B, p. 285. (Geosaurus.)

Leidy, J. 1856 L, p. 255. (Drepanodon impar.)

1857 A, p. 271. (Drepanodon impar.)

1859 B, p. 10. (Lesticodus impar.)

1859 D, p. 92. (Geosaurus.)

1835 A, p. 65, pl. xi, figs. 1-4, *vide* Cope. (Mosasaurus mitchillii.)

1865 D, p. 70 in part.

Williston, S. W. 1897 F, pp. 182, 183. (Tylosaurus.)

1898 E, p. 172. (Tylosaurus.)

Cretaceous; New Jersey.

TYLOSAURUS Marsh. Type *T. micromus* Marsh.

Marsh, O. C. 1872 H, p. 147. (To replace Rhinosaurus Marsh and Rhamphosaurus Cope, both preoccupied.)

Since the American species assigned to *Tylosaurus* may prove to be congeneric with those

called by Owen *Leiodon* and by others *Liodon*, references to literature of the latter title is given. *Leiodon* is, however, preoccupied by Swainson, 1839.

Charlesworth, E. 1846 A. (Liodon.)

- Cope, E. D. 1869 M, p. 200. (Liodon.)
 1871 D, p. 401. (Liodon.)
 1871 N, p. 273. (Liodon.)
 1872 F, p. 331. (Liodon.)
 1872 CC, p. 141. (Rhamphosaurus, to replace Rhinosaurus.)
 1874 C, pp. 31, 36, 37. (Liodon, Nectoporthus.)
 1875 E, pp. 128, 160, 271. (Liodon, Nectoporthus.)
 1878 G. (Liodon.)
 1879 J. (Liodon.)
 Dollo, L. 1885 C, pp. 28, 30. (Liodon, Tylosaurus.)
 Gaudry, A. 1892 A, p. 2. (Leiodon.)
 Leidy, J. 1873 B, p. 343.
 Lydekker, R. 1888 B, p. 264. (Liodon.)
 Marsh, O. C. 1872 C, p. 291. (Liodon.)
 1872 F, pp. 455, 461. (Rhinosaurus, type *R. micromus*.)
 1880 A, p. 84.
 Merriam, J. C. 1894 A, p. 14.
 Nicholson and Lydekker 1889 A, p. 1144.
 Osborn, H. F. 1899 D, p. 167.
 Owen, R. 1842 A, p. 144. (Leiodon, type *L. anceps* Owen.)
 1845 B, p. 261, pl. lxxii. (Leiodon.)
 1851 B, p. 41. (Leiodon.)
 1879 B. (Leiodon.)
 1880 A. (Leiodon.)
 Pictet, F. J. 1853 A, p. 507. (Leiodon.)
 Snow, F. H. 1878 A, p. 54. (Liodon.)
 Steinmann and Döderlein 1890 A, p. 646. (Liodon.)
 Williston, S. W. 1891 A. (Liodon.)
 1897 E.
 1897 F, p. 177.
 1897 J, p. 108.
 1898 E, p. 171.
 Zittel, K. A. 1890 A, p. 622. (Liodon.)
- Tylosaurus congrops (Cope).**
Cope, E. D. 1869 M, p. 206. (Liodon.)
 1870 D, p. 271. (Liodon.)
 1875 E, p. 272. (Liodon.)
 Cretaceous; Alabama.
- Tylosaurus dyspelor (Cope).**
Cope, E. D. 1870 Q. (Liodon.)
 1870 O, p. 574. (Liodon.)
 1871 D, p. 410. (Liodon.)
 1871 J, p. 169. (Liodon.)
 1871 K, p. 174. (Liodon.)
 1871 N, p. 280. (Liodon.)
 1872 F, pp. 321, 333. (Liodon.)
 1872 CC, p. 141. (Liodon.)
 1874 C, p. 38. (Liodon.)
 1875 E, pp. 46, 167, 271, pl. xxvii, fig. 11; pl. xxviii, figs. 1-7; pls. xxix-xxxiii; pl. xxxiv, fig. 1; pl. xxxvii, fig. 5. (Liodon.)
 Gibbs, R. W. 1851 A, p. 6. (Liodon.)
 Leidy, J. 1873 B, pp. 271, 343, pl. xxxv, figs. 1-11.
 Marsh, O. C. 1872 F, p. 463. (Rhinosaurus.)
 1872 T, p. 496. (Liodon.)
 Merriam, J. C. 1894 A, p. 23, pl. iv, figs. 3, 4.
 Osborn, H. F. 1899 D, p. 167, pls. xxi-xxiii, text figs. 1, 7-9, 11-14.
 1899 F, p. 913.

- Snow, F. H. 1878 A, p. 54. (Liodon.)
 Williston, S. W. 1898 E, p. 145 *et seq.*, pl. xliii, figs. 1, 2; pl. xlv, fig. 4; pl. lix; pl. lxi, figs. 1, 2.
 1897 J, p. 110.
 Cretaceous (Niobrara); New Mexico, Kansas.

Tylosaurus laticaudus (Marsh).

- Marsh, O. C.* 1870 F. (Liodon.)
 Cretaceous; New Jersey.

Tylosaurus micromus Marsh.

- Marsh, O. C.* 1872 F, p. 461, pl. xiii. (Rhinosaurus.)
Cope, E. D. 1874 C, p. 36. (Liodon.)
 1875 E, p. 271. (Liodon.)
Marsh, O. C. 1880 A, p. 85, fig. 1.
Merriam, J. C. 1894 A, p. 23, pl. i, fig. 3; pl. iii, fig. 8.
Williston, S. W. 1898 E, p. 175.
 Cretaceous (Niobrara); Kansas.

Tylosaurus nepæolicus (Cope).

- Cope, E. D.* 1874 C, p. 37. (Liodon, Rhamphosaurus.)
 1875 E, pp. 177, 271, pl. xxxv, figs. 11-15. (Liodon.)
Williston, S. W. 1898 E, p. 176.
 Cretaceous (Niobrara); Kansas.

Tylosaurus perlatus (Cope).

- Cope, E. D.* 1869 M (1870), p. ii of Errata and Addenda (Liodon); p. 198 ("Mosasaurus brumby").
 1870 J, p. 497. (Liodon.)
 1875 E, p. 271. (Liodon.)
Lydekker, R. 1888 B, p. 267. (Liodon.)
 Cretaceous; Alabama.

Tylosaurus proriger (Cope).

- Cope, E. D.* 1869 H, p. 123. (Macrosaurus.)
Ballou, W. H. 1898 A, pp. 217, 224, figure.
Cope, E. D. 1869 M, p. 202, pl. xii, figs. 22-24. (Liodon.)
 1871 A. (Liodon.)
 1871 D, p. 401. (Liodon.)
 1871 K, p. 175. (Liodon.)
 1871 N, p. 271. (Liodon.)
 1872 F, pp. 321, 333. (Liodon.)
 1872 CC, p. 141. (Rhamphosaurus, provisionally.)
 1874 C, p. 38. (Liodon.)
 1875 E, pp. 46, 161, 271, pl. xxviii, figs. 8, 9; pl. xxx, figs. 10-14; pl. xxxvi, fig. 2; pl. xxxvii, fig. 6. (Liodon.)
Leidy, J. 1870 E, p. 4. (Liodon.)
 1873 B, pp. 274, 344, pl. xxxv, fig. 13; pl. xxxvi, figs. 1-3.
Marsh, O. C. 1872 F, p. 463. (Rhinosaurus.)
Merriam, J. C. 1894 A, p. 23, pl. ii; pl. iii, figs. 1, 2.
Osborn, H. F. 1899 D, p. 169.
Williston, S. W. 1897 E, p. 102, pls. ix, x.
 1897 F, pl. xx.
 1897 J, p. 110.
 1898 E, p. 173, pls. xvi-xviii; pl. xxix, fig. 1; pl. xl, figs. 1-7; pl. xli, fig. 1; pl. xlviii, fig. 7; pl. lv; pl. lx, figs. 1, 2; pls. lxx-lxxix; pl. lxxii, fig. 3.
 Cretaceous (Niobrara); Kansas.

Tylosaurus rapax sp. nov.

- Cope, E. D. 1869 M, p. 187, text fig. 48⁵; p. 188, text fig. 49⁴; pp. 201, 207. (Liodon validus; not Nectoporphus validus Cope, 1868.)
 1870 D, p. 272. (Liodon validus.)
 1875 E, p. 271, pl. xxxvii, fig. 4. (Liodon validus.)

Leidy, J. 1865 A, p. 74, in part, pl. iii, figs. 1-2; pl. vii, figs. 19, 20. (Macrosaurus lævis.)
 Cretaceous; New Jersey.

Tylosaurus sectorius (Cope).

- Cope, E. D. 1871 G, p. 41. (Liodon.)
 1875 E, p. 271. (Liodon.)
 Cretaceous; New Jersey.

DIPLOTOMODON Leidy. Type *D. horrificus* Leidy.

- Leidy, J. 1868 G, p. 202. (To replace Tomodon, preoccupied.)
 Cope, E. D. 1868 C, p. 417. (Tomodon.)
 1875 E, p. 272.
 Leidy, J. 1865 A, p. 102. (Tomodon, type *T. horrificus*; not Tomodon Duméril, 1853.)
 Zittel, K. A. 1890 A, pp. 624, 727.

Diplotomodon horrificus Leidy.

- Leidy, J. 1865 A, pp. 102, 119, pl. xx, figs. 7-9. (Tomodon.)
 Cope, E. D. 1875 E, p. 272.
 Leidy, J. 1865 D, p. 72. (Tomodon.)
 1868 G, p. 202.
 Cretaceous; New Jersey.

ELLIPTONODON Emmons. Type *E. compressus* Emmons.

- Emmons, E. 1858 B, p. 222.
 A genus whose value and systematic position are doubtful.

Elliptonodon compressus Emmons.

- Emmons, E. 1858 B, p. 222, figs. 41, 42.
 Cope, E. D. 1869 M, p. 186.
 Leidy, J. 1865 A, pp. 63, 117.
 Cretaceous; North Carolina.

POLYGONODON Leidy. Type *P. vetus* Leidy.

- Leidy, J. 1856 K, p. 221.
 Cope, E. D. 1869 M, pp. 185, 210.
 A genus of uncertain ordinal position.

Polygonodon rectus Emmons.

- Emmons, E. 1858 B, p. 218 (Mosasaurus); fig. 37 A (Polygonodon).
 Cope, E. D. 1869 M, p. 211.
 1875 V, p. 41.
 Emmons, E. 1860 A, p. 208, fig. 180².
 Leidy, J. 1865 A, pp. 76, 118. (Syn. of *P. vetus*.)
 Miocene; North Carolina.

Polygonodon vetus Leidy.

- Leidy, J. 1856 K, p. 221.
 Cope, E. D. 1869 B, p. 734.
 1869 M, p. 210.
 1875 E, p. 280.
 Leidy, J. 1865 A, pp. 76, 118, pl. ix, figs. 12, 13.
 1865 D, p. 70.
 Cretaceous; New Jersey.

Suborder SAURIA Macartney.

Macartney, J., 1802, Lectures on Comp. Anat., i, tab. 3.

Unless otherwise indicated, the following authors use the term *Lacertilia* for this order.

Baur, G. 1885 E, p. 634.

1887 C, p. 99.

1895 A.

1895 D.

1896 A.

Born, G. 1876 A. ("Saurier.")

1880 A, p. 63. ("Saurier.")

Boulenger, G. A. 1884 A.

1885 A.

1887 A.

1891 A.

1893 A, p. 1.

1895 A.

Burckhardt, C. K. 1895 A.

Calori, L. 1894 A.

Cope, E. D. 1864 A.

1839 M, p. 28.

Cope, E. D. 1871 B.

1878 G, p. 300.

1882 J, p. 981.

1887 S, p. 334.

1891 N, pp. 45, 47.

1892 F.

1892 Z, p. 19.

1895 C, p. 857.

1895 D.

1896 A.

1896 B.

1898 B, p. 74.

Cuvier, G. 1834 A, x, pp. 1-98.

Dollo, L. 1885 B.

Fürbringer, M. 1900 A, pp. 231, 537, 605, 620.

Gadow, H. 1896 A, p. 29.

1898 A, p. 24. (Sauria.)

Gaupp, E. 1894 A.

1895 B.

1898 A, p. 302.

1900 A.

Gegenbaur, C. 1864 A.
1865 B, p. 40.
1898 A.

Gill, T. 1900 A, p. 730.

Gorski, C. 1858 A.

Günther, A. 1886 A, p. 444.

Haeckel, E. 1895 A, p. 344.

Hoffmann, C. K. 1876 A.

1878 A.

1879 A, p. 99.

1890 B. (Saurii.)

Huxley, T. H. 1870 A.

1872 A, p. 186.

1876 B, xiii, p. 429.

Leidy, J. 1871 C, p. 368.

Levy, H. 1898 A.

Lydekker, R. 1888 B, p. 275.

Marsh, O. C. 1877 E.

Mivart, St. G. 1886 A, p. 448.

Müller, J. 1831 A, p. 238. (Lacertina.)

Nicholson and Lydekker 1889 A, p. 1138.

Osborn, H. F. 1900 A, p. 1

Owen, R. 1842 A, p. 144.

1860 A, p. 165.

1866 A.

1877 A.

Parker, W. K. 168 A, p. 100.

1879 B, p. 63.

1880 A.

Rathke, H. 1853 A. ("Saurier.")

Segond, L. A. 1873 A, p. 14. ("Lézard.")

Siebenrock, F. 1892 A.

1893 A.

1894 A.

1895 A.

1895 B.

Stannius, H. 1856 A. (Sauria.)

Steinmann and Döderlein 1890 A, p. 644.

Tomes, C. S. 1898 A, p. 270. ("Saurians.")

Wiedersheim, R. 1889 A, p. 438.

Zittel, K. A. 1890 A, pp. 450, 602.

IGUANIDÆ.

Gray, J. E., 1827, Philos. Mag. (2), ii, p. 127.

Boulenger, G. A. 1884 A, p. 119.

1885 A, p. 1.

Cope, E. D. 1864 A, p. 227. (Anolidæ, Iguanidæ.)

1900 A, p. 220.

Gadow, H. 1898 A, p. 25.

Hoffmann, C. K. 1890 B, p. 1217.

Lydekker, R. 1888 B, p. 277.

Parker, W. K. 1868 A, p. 107. (Iguana.)

Siebenrock, F. 1895 B. (On Agamidæ.)

Stannius, H. 1856 A. (Iguanoidea.)

Zittel, K. A. 1890 A, p. 607.

IGUANAVUS Marsh. Type *I. exilis* Marsh.

Marsh, O. C. 1872 K, p. 309.

Nicholson and Lydekker 1889 A, p. 1140.

Iguanavus exilis Marsh.

Marsh, O. C. 1872 K, p. 309.

King, C. 1878 A, p. 405.

Eocene (Bridger); Wyoming.

Iguanavus teres Marsh. ✓

Marsh, O. C. 1892 E, p. 451.

Cretaceous (Laramie); Wyoming.

CHAMOPS Marsh. Type *C. segnis* Marsh.

Marsh, O. C. 1892 E, p. 450.

Provisionally assigned to the *Iguanidæ*.

Chamops segnis Marsh. ✓

Marsh, O. C. 1892 E, p. 450, figs. 2, 3.

Cretaceous (Laramie); Wyoming.

ANGUIDÆ.

Cope, E. D. 1864 A, pp. 227, 228. (Anguidæ, Ger-
rhonotidæ.)

Boulenger, G. A. 1884 A, p. 121.

1885 A, ii, p. 265.

Cope, E. D. 1877 K, p. 42. (Placosauridæ.)

1882 J, p. 981. (Placosauridæ.)

1884 O, p. 772. (Gerrhonotidæ.)

1900 A, p. 488.

Gadow, H. 1898 A, p. 25.

Gaupp, E. 1898 A. (Anguis.)

Hoffmann, C. K. 1890 B. (Anguis.)

Lydekker, R. 1888 B, p. 278.

Marsh, O. C. 1877 E, p. 222. (Glyptosauridæ.)

Nicholson and Lydekker 1889 A, p. 1140.

Parker, W. K. 1868 A, p. 98.

Siebenrock, F. 1892 A.

1895 A.

Zittel, K. A. 1890 A, p. 607.

PLACOSAURUS Gervais. Type *P. rugosus* Gervais.

Gervais, P., 1852, Zool. Paléont. France, ed. i, p.
260.

Lydekker, R. 1888 C, p. 110.

Nicholson and Lydekker 1889 A, p. 1140.

Pictet, Gaudin, and Harpe 1857 A, p. 93.

Zittel, K. A. 1890 A, p. 608.

Placosaurus ? sp. indet.

Cope, E. D. 1877 K, p. 42, pl. xxxii, figs. 26-36.

Eocene; New Mexico.

The fossil fragments above described Professor
Cope referred with doubt to the Placosauridæ.

GLYPTOSAURUS Marsh. Type *G. sylvestris* Marsh.

Marsh, O. C. 1871 B, p. 456.

Boulenger, G. A. 1891 A, p. 117.

Cope, E. D. 1875 C, p. 34.

Leidy, J. 1872 B, p. 371.

1873 B, p. 182.

Marsh, O. C. 1871 G, p. 105.

1872 K, p. 302.

Nicholson and Lydekker 1889 A, p. 1141.

Zittel, K. A. 1890 A, p. 608.

Glyptosaurus anceps Marsh.

Marsh, O. C. 1871 B, p. 458.

1871 G, p. 105.

Eocene (Bridger); Wyoming.

Glyptosaurus brevidens Marsh.

Marsh, O. C. 1872 K, p. 305.

Eocene (Bridger); Wyoming.

Glyptosaurus nodosus Marsh.

Marsh, O. C. 1871 B, p. 458.

1871 G, p. 105.

Eocene (Bridger); Wyoming.

Glyptosaurus ocellatus Marsh.

Marsh, O. C. 1871 B, p. 458.

? Leidy, J. 1873 B, p. 183, pl. xvi, figs. 13-17.

Marsh, O. C. 1871 G, p. 105.

1872 K, p. 306.

Eocene (Bridger); Wyoming.

Glyptosaurus princeps Marsh.

Marsh, O. C. 1872 K, p. 302.

King, C. 1878 A, p. 405.

Eocene (Bridger); Wyoming.

Glyptosaurus rugosus Marsh.

Marsh, O. C. 1872 K, p. 305.

Eocene (Bridger); Wyoming.

Glyptosaurus sphenodon Marsh.

Marsh, O. C. 1872 K, p. 306.

Eocene (Bridger); Wyoming.

Glyptosaurus sylvestris Marsh.

Marsh, O. C. 1871 B, p. 456.

1871 G, p. 105.

Eocene (Bridger); Wyoming.

XESTOPS Cope. Type *Oreosaurus vagans* Marsh.

Cope, E. D. 1873 CC, p. 19. (To replace *Oreosaurus* Marsh, preoccupied.)

Marsh, O. C. 1872 K, p. 303. (*Oreosaurus*, type *O. vagans*; not *Oreosaurus* Peters, 1862.)

Nicholson and Lydekker 1889 A, p. 1141.

Zittel, K. A. 1890 A, p. 608.

Xestops gracilis (Marsh).

Marsh, O. C. 1872 K, p. 307. (*Oreosaurus*.)

Eocene (Bridger); Wyoming.

Xestops lentus (Marsh).

Marsh, O. C. 1872 K, p. 307. (*Oreosaurus*.)

King, C. 1878 A, p. 405.

Eocene (Bridger); Wyoming.

Xestops microdus (Marsh).

Marsh, O. C. 1872 K, p. 308. (*Oreosaurus*.)

Eocene (Bridger); Wyoming.

Xestops minutus (Marsh).

Marsh, O. C. 1872 K, p. 308. (*Oreosaurus*.)

Eocene (Bridger); Wyoming.

Xestops vagans (Marsh).

Marsh, O. C. 1872 K, p. 303. (*Oreosaurus*.)

Eocene (Bridger); Wyoming.

SANIWA Leidy. Type *S. ensidens* Leidy.

Leidy, J. 1870 S, p. 124.

1871 C, p. 368.

1872 B, p. 370.

1873 B, p. 181. (*Saniva*.)

Marsh, O. C. 1872 K, p. 299.

Nicholson and Lydekker 1889 A, p. 1141. (*Saniva*.)

Zittel, K. A. 1890 A, p. 608. (*Saniva*.)

Saniwa ensidens Leidy.

Leidy, J. 1870 S, p. 124.

Cope, E. D. 1873 E, p. 632. (*Saniva*.)

King, C. 1878 A, p. 405.

Leidy, J. 1871 C, p. 368.

1872 B, p. 370.

1873 B, pp. 181, 344, pl. xv, fig. 15; pl. xxvii, fig. 35. (*Saniva*.)

Marsh, O. C. 1871 B, p. 457. (*Saniva*.)

Eocene (Bridger); Wyoming.

Saniwa major Leidy.

Leidy, J. 1873 B, pp. 182, 345, pl. xv, fig. 14; pl. xxvii, figs. 36, 37. (*Saniva*.)

Eocene (Bridger); Wyoming.

PELTOSAURUS Cope. Type *P. granulosus* Cope.

Cope, E. D. 1873 S, p. 5.

1873 CC, p. 19.

1874 B, p. 512.

1884 O, p. 771.

Hoffmann, C. K. 1890 B, p. 1324.

Nicholson and Lydekker 1889 A, p. 1140.

Zittel, K. A. 1890 A, p. 608.

Peltosaurus granulosus Cope.

Cope, E. D. 1873 S, p. 5.

1873 CC, p. 19.

1874 B, p. 513.

1874 H.

1884 O, p. 773, pl. 1x, figs. 3-11.

Miocene; Colorado.

EXOSTINUS Cope. Type *E. serratus* Cope.

Cope, E. D. 1873 CC, pp. 16, 19.

1874 B, p. 513.

1884 O, p. 775.

Nicholson and Lydekker 1889 A, p. 1140.

Zittel, K. A. 1890 A, p. 610.

Exostinus serratus Cope.

Cope, E. D. 1873 CC, p. 16.

1874 B, p. 514.

1884 O, p. 776, pl. lx, figs. 12-14.

Oligocene (White River); Colorado.

VARANIDÆ.

Cope, E. D. 1864 A, p. 227.

Baur, G. 1890 A, p. 292.

Beddard, F. E. 1888 A.

Boulenger, G. A. 1884 A, p. 122.

1885 A, p. 303.

1891 A, p. 117.

Cope, E. D. 1878 G, p. 305.

1900 A, p. 470.

Dollo, L. 1893 C, p. 252.

Fürbringer, M. 1900 A.

Gadow, H. 1898 A, p. 26.

Hoffmann, C. K. 1900 B, p. 1068. (Monitoridæ.)

Lydekker, R. 1888 B, p. 281.

Parker, W. K. 1868 A, p. 116. (Monitor.)

Stannius, H. 1856 A. (Varani.)

Zittel, K. A. 1890 A, p. 608.

THINOSAURUS Marsh. Type *T. paucidens* Marsh.

Marsh, O. C. 1872 K, p. 299.

Boulenger, G. A. 1891 A, p. 115.

Hoffmann, C. K. 1890 B, p. 1324.

Zittel, K. A. 1890 A, p. 609.

Thinosaurus agilis Marsh.

Marsh, O. C. 1872 K, p. 302.

Eocene (Bridger); Wyoming.

Thinosaurus crassus Marsh.

Marsh, O. C. 1892 K, p. 301.

Eocene (Bridger); Wyoming.

Thinosaurus grandis Marsh.

Marsh, O. C. 1872 K, p. 301.

Eocene (Bridger); Wyoming.

Thinosaurus leptodus Marsh.

Marsh, O. C. 1872 K, p. 300.

Cope, E. D. 1873 E, p. 632.

King, C. 1878 A, p. 405.

Eocene (Bridger); Wyoming.

Thinosaurus paucidens Marsh.

Marsh, O. C. 1872 K, p. 299.

Eocene (Bridger); Wyoming.

TINOSAURUS Marsh. Type *T. stenodon* Marsh.

Marsh, O. C. 1872 K, p. 304.

Zittel, K. A. 1890 A, p. 609.

The position of this genus is uncertain.

Tinosaurus lepidus Marsh.

Marsh, O. C. 1872 K, p. 308.

Eocene (Bridger); Wyoming.

Tinosaurus stenodon Marsh.

Marsh, O. C. 1872 K, p. 304.

Eocene (Bridger); Wyoming.

AMPHISBÆNIDÆ.

Gray, J. E., 1825, Philos. Mag. (2), x.

Baur, G. 1893 C. (Amphisbænidæ; Hypsorrhini-dæ.)

Boulenger, G. A. 1884 A.

1885 A, p. 430.

Cope, E. D. 1864 A, p. 226. (Amphisbænia.)

1871 B.

1900 A, p. 622.

Fürbringer, M. 1900 A, pp. 258, 539, 616, 622. (Amphisbænia; Amphisbænidæ.)

Gadow, 1898 A, p. 27.

Gervais, P. 1853 A, p. 293. ("Amphisbænes.")

Haeckel, E. 1895 A, p. 349. (Glyptoderma.)

Hoffmann, C. K. 1890 B, p. 1288.

Müller, J. 1831 A, p. 253. (Amphisbænoidea.)

Owen, R. 1845 B, p. 334. (Amphisbæniæ.)

Parker, W. K. 1868 A, p. 95. (Amphisbæniæ.)

Stannius, H. 1856 A. (Amphisbænoidea.)

RHINEŪRA Cope. Type *R. floridana* Cope.

Cope, E. D., 1861, Proc. Acad. Nat. Sci. Phila., p. 75.

Boulenger, G. A. 1885 A, p. 459.

Cope, E. D. 1900 A, p. 684.

Fürbringer, M. 1900 A, p. 265.

Rhineŭra hatcherii Baur.

Baur, G. 1893 C.

Oligocene (White River); South Dakota.

HYPSORHINA Baur. Type *H. antiqua* Baur.*Baur, G.* 1893 C.**Hypsorhina antiqua** Baur.*Baur, G.* 1893 C.

Oligocene (White River); South Dakota.

TYLOSTEUS Leidy. Type *T. ornatus* Leidy.*Leidy, J.* 1872 E, p. 40.

1873 B, p. 285.

The position of this fossil is doubtful. It is not improbably a portion of the dermal armor of some Dinosaur.

Tylosteus ornatus Leidy.*Leidy, J.* 1872 E, p. 40.

1873 B, pp. 285, 345. pl. xix, fig. 14: fig. 13?.

Cretaceous?; Montana? (Head of Missouri River.)

ACIPRION Cope. Type *A. formosum* Cope.*Cope, E. D.* 1873 CC, p. 17.

1874 B, p. 514.

1884 O, p. 776.

Aciprion formosum Cope.*Cope, E. D.* 1873 CC, p. 17.

1874 B, p. 514.

1884 O, p. 776, pl. lx, fig. 15.

Oligocene (White River); South Dakota.

DIACIUM Cope. Type *D. quinquepedale* Cope.*Cope, E. D.* 1873 CC, p. 17.

1874 B, p. 514.

1884 O, p. 777.

Diacium quinquepedale Cope.*Cope, E. D.* 1873 CC, p. 17.

1874 B, p. 514.

1884 O, p. 777, pl. lx, fig. 20.

Oligocene (White River); Colorado.

CREMASTOSAURUS Cope. Type *C. carinicollis* Cope.*Cope, E. D.* 1873 CC, p. 18.

1874 B, p. 515.

1884 O, p. 780.

Crematosaurus carinicollis Cope.*Cope, E. D.* 1873 CC, p. 18.

1874 B, p. 515. (In part.)

1884 O, pp. 779, 781, pl. lx, fig. 16.

Oligocene (White River); Colorado.

PLATYRHACHIS Cope. Type *P. coloradoensis* Cope.*Cope, E. D.* 1873 CC, p. 19.

1874 B, p. 516.

1884 O, p. 777.

Platyrhachis coloradoensis Cope.*Cope, E. D.* 1873 CC, p. 19.

1874 B, p. 516.

1884 O, p. 778, pl. lx, fig. 17.

Oligocene (White River); Colorado.

Platyrhachis rhambastes Cope.*Cope, E. D.* 1884 O, p. 779, pl. lx, fig. 18.

1874 B, p. 516. (Crematosaurus carinicollis, in part.)

Oligocene (White River); Colorado.

Platyrhachis unipedalis Cope.*Cope, E. D.* 1873 CC, p. 18. (Diacium.)

1874 B, p. 516. (Crematosaurus.)

1884 O, p. 779, pl. lx, fig. 19.

Oligocene (White River); Colorado.

NAOCEPHALUS Cope. Type *N. porrectus* Cope.*Cope, E. D.* 1872 M, p. 465.

1873 E, p. 631.

A genus of uncertain affinities.

Naocephalus porrectus Cope.*Cope, E. D.* 1872 M, p. 465.

1873 E, p. 632.

Eocene (Bridger); Wyoming.

Suborder RHPTOGLOSSI Wiegmann.

- Wiegmann, A. F. A., 1834, *Herp. Mex.*, p. 13.
 Boulenger, G. A. 1884 A, p. 120. (Rhptoglossa.)
 1887 A, p. 437. (Rhptoglossa.)
 1891 A, p. 117. (Rhptoglossa.)
 Cope, E. D. 1864 A. (Rhptoglossa.)
 1895 C, p. 859. (Rhptoglossa.)
 1900 A, p. 208. (Rhptoglossa.)
 Dollo, L. 1893 C, p. 259.
- Fürbringer, M. 1900 A, pp. 265, 586, 619, 622.
 (Chamæleontina.)
 Gadow, H. 1898 A, p. 27. (Chamæleontes.)
 Haeckel, E. 1895 A, p. 348. (Chamæleontes.)
 Nicholson and Lydekker 1889 A, p. 1142. (Rhptoglossa.)
 Tomes, C. S. 1898 A, p. 272. ("Chamæleons.")
 Stannius, H. 1856 A. (Chamæleonidea.)

CHAMÆLEONIDÆ.

- Gray, J. E. 1825, *Ann. Philos.* (2), x, p. 200.
 Boulenger, G. A. 1884 A, p. 120.
 1887 A, p. 437.
 Cope, E. D. 1895 C, p. 859.
- Cope, E. D. 1900 A, p. 209.
 Hoffmann, C. K. 1890 B, p. 1280.
 Nicholson and Lydekker 1889 A, p. 1142.
 Siebenrock, F. 1893 B.

CHAMÆLEO Laurenti.

- Laurenti, J. N., 1768, *Syn. Rept.*, p. 45.
 Born, G. 1876 A, p. 21.
 Boulenger, G. A. 1887 A, p. 438. (Chamæleon.)
 Cope, E. D. 1900 A, p. 211. (Chamæleon.)
 Deslongchamps-Eudes, J. A. 1838 A, p. 96. ("Chamæléon.")
 Fürbringer, M. 1900 A.
 Hoffmann, C. K. 1890 B, pp. 450, 1280.
 Parker, W. K. 1868 A, p. 122.
- Rathke, H. 1853 A, p. 25.
 Siebenrock, F. 1893 B.
 Stecker, A. 1877 A. (Chamæleon.)
- Chamæleo pristinus** Leidy.
Leidy, J. 1872 J, p. 277.
 1873 B, pp. 184, 345, pl. xxvii, figs. 38, 39.
 Eocene; Wyoming.

Suborder SERPENTES Linn.

- Linnaeus, C., 1758, *Syst. Nat.*, ed. x, p. 194.
 The following authorities, unless otherwise indicated, refer to this group under the name *Ophidia*.
 Baur, G. 1887 C, p. 99.
 1895 A.
 1896 A.
 Boulenger, G. A. 1893 A.
 1895 A.
 1896 A.
 1896 C.
 Calori, L. 1894 A.
 Cope, E. D. 1864 A.
 1871 B.
 1878 G, p. 300.
 1882 J, p. 981.
 1886 V.
 1887 S, p. 334.
 1891 N, pp. 45, 50.
 1892 Z, p. 20.
 1895 C, p. 857.
 1895 D.
 1896 A.
 1896 B.
 1898 B, p. 75 (Serpentes); p. 79 (Ophidia).
 Fürbringer, M. 1900 A.
 Gadow, H. 1889 A, p. 471.
- Gadow, H. 1898 A, p. 28.
 Gill, T. 1900 A, p. 730.
 Günther, A. C. 1886 A, p. 445.
 Haeckel, E. 1895 A, p. 353. (Serpentes.)
 Hoffmann, C. K. 1890 C.
 Huxley, T. H. 1872 A, p. 200.
 Levy, H. 1900 A.
 Lydekker, R. 1888 B, p. 249.
 Marsh, O. C. 1877 E.
 Müller, J. 1831 A, p. 263.
 Nicholson and Lydekker 1889 A, p. 1146.
 Owen, R. 1845 B, p. 219.
 1850 A, p. 51.
 1860 A, p. 166.
 1866 A.
 1877 A.
 Parker, W. K. 1879 A.
 1879 B.
 Pictet, F. J. 1853 A, p. 555. ("Ophidiens.")
 Rochebrune, A. T. 1881 A.
 Segond, L. A. 1873 A, p. 17. ("Serpent.")
 Stannius, H. 1856 A.
 Steinmann and Döderlein 1890 A, p. 646.
 Tomes, C. S. 1895 A, p. 273.
 Walter, F. 1887 A.
 Zittel, K. A. 1890 A, pp. 450, 624.

PALÆOPHIDÆ.

- Lydekker, R. 1888 C, p. 113.
 1888 B, p. 256.

- Nicholson and Lydekker 1889 A, p. 1147.

PALEOPHIS Owen. Type *P. toliapicus* Owen.

Owen, R. 1840 G, p. 165.

Cope, E. D. 1868 K, p. 234.

1869 M, pp. 227, 299.

Lydekker, R. 1888 C, p. 112.

1888 B, p. 256.

Marsh, O. C. 1869 C, p. 400. (Dinophis, type *Palæophis littoralis* Cope.)

1871 A, p. 323. (Dinophis.)

1877 E, p. 223. (Titanophis, to replace Dinophis, preoccupied.)

Nicholson and Lydekker 1889 A, p. 1148.

Owen, R. 1841 B, p. 209.

1842 A, p. 150.

1850 A, p. 56.

Pictet, F. J. 1853 A, p. 556.

Rochebrune, A. T. 1880 A, p. 274.

Zittel, K. A. 1890 A, p. 628. (Palæophis, Titanophis.)

Palæophis grandis (Marsh).

Marsh, O. C. 1869 C. (Dinophis.)

Cope, E. D. 1869 M, p. 228.

Cope, E. D. 1872 Y, p. 14.

Eocene; New Jersey.

Palæophis halidanus Cope.

Cope, E. D. 1868 K, p. 234.

1869 B, p. 738.

1869 M, p. 227, pl. v, fig. 2.

1872 Y, p. 14.

1882 J, p. 981, fig. 2.

Marsh, O. C. 1869 C, p. 400. (Dinophis.)

Eocene; New Jersey.

Palæophis littoralis Cope.

Cope, E. D. 1868 F.

1868 K, p. 234.

1869 B, p. 737.

1869 M, p. 227, pl. v, fig. 1.

1872 Y, p. 14.

1882 J, p. 981, fig. 1.

Marsh, O. C. 1869 C, p. 400. (Dinophis.)

Eocene; New Jersey.

PTEROSPHEMUS Lucas. Type *P. schucherti* Lucas.

Lucas, F. A. 1898 B.

Pterosphepus schucherti Lucas.

Lucas, F. A. 1898 B, p. 637, pls. xlv, xlv.

Schuchert, C. 1900 A, p. 328.

Eocene (Jackson); Alabama.

BOIDÆ.

Gray, J. E. 1842, Zool. Miscell., p. 41. (In part.)

Boulenger, G. A. 1893 A, p. 71.

Cope, E. D. 1864 A, p. 230. (Pythonidæ, Boidæ.)

1886 V, pp. 479, 484.

1900 A, p. 721.

Gadow, H. 1898 A, p. 28.

Hoffmann, C. K. 1890 C, p. 1753. (Boaidæ.)

Rochebrune, A. T. 1881 A, p. 201. ("Aprotérodontiens.")

Segond, L. A. 1873 A, p. 17. ("Python.")

Stannius, H. 1856 A. (Peropoda.)

Tomes, C. S. 1898 A, p. 373. ("Pythons.")

Zittel, K. A. 1890 A, p. 629. (Boaidæ.)

BOAVUS Marsh. Type *B. occidentalis* Marsh.

Marsh, O. C. 1871 A, p. 322.

Cope, E. D. 1884 O, p. 103.

Nicholson and Lydekker 1889 A, p. 1147.

Zittel, K. A. 1890 A, p. 629.

Boavus agilis Marsh.

Marsh, O. C. 1871 A, p. 324.

King, C. 1878 A, p. 405.

Eocene (Bridger); Wyoming.

Boavus brevis Marsh.

Marsh, O. C. 1871 A, p. 324.

King, C. 1878 A, p. 405.

Eocene (Bridger); Wyoming.

Boavus occidentalis Marsh.

Marsh, O. C. 1871 A, p. 323.

King, C. 1878 A, p. 405.

Eocene (Bridger); Wyoming.

PROTAGRAS Cope. Type *P. lacustris* Cope.

Cope, E. D. 1872 E, p. 471.

1884 O, p. 102.

Nicholson and Lydekker 1889 A, p. 1147.

Zittel, K. A. 1890 A, p. 629. (Syn. ? of *Boavus* Marsh.)

Protagras lacustris Cope.

Cope, E. D. 1872 E, p. 471.

1873 E, p. 632.

1884 O, p. 103, pl. xxiii, figs. 17, 18

Eocene (Bridger); Wyoming.

LITHOPHIS Marsh. Type *L. sargenti* Marsh.

Marsh, O. C. 1871 A, p. 325.

Nicholson and Lydekker 1889 A, p. 1147.

Lithophis sargenti Marsh.

Marsh, O. C. 1871 A, p. 325.

King, C. 1878 A, p. 405.

Eocene (Bridger); Wyoming.

LESTOPHIS Marsh. Type *L. crassus* Marsh.

Marsh, O. C. 1885 A, p. 326. (To replace Limnophis, preoccupied.)
 1871 A, p. 326. (Limnophis.)
 Nicholson and Lydekker 1889 A, p. 1147.

Lestophis crassus Marsh.

Marsh, O. C. 1871 A, p. 328. (Limnophis.)
 King, C. 1878 A, p. 405. (Limnophis.)
 Marsh, O. C. 1885 A.
 Eocene (Bridger); Wyoming.

APHELOPHIS Cope. Type *A. talpivorus* Cope.

Cope, E. D. 1873 CC, p. 16.
 1874 B, p. 518.
 1884 O, p. 781.
 Nicholson and Lydekker 1889 A, p. 1147.
 Zittel, K. A. 1890 A, p. 630.

Aphelophis talpivorus Cope.

Cope, E. D. 1873 CC, p. 16.
 1874 B, p. 518.
 1884 O, p. 782, pl. 1x, fig. 21.
 Oligocene (White River); Colorado.

CALAMAGRAS Cope. Type *C. murivorus* Cope.

Cope, E. D. 1873 CC, p. 15.
 1874 B, p. 517.
 1884 O, p. 784.
 Nicholson and Lydekker 1889 A, p. 1147.
 Zittel, K. A. 1890 A, p. 630.

Calamagras murivorus Cope.

Cope, E. D. 1873 CC, p. 15. (C. murivorus, C. truxalis.)
 1874 B, p. 517. (C. murivorus, C. truxalis.)
 1884 O, p. 784.
 Oligocene (White River); Colorado.

OGMOPHIS Cope. Type *O. angulatus* Cope.

Cope, E. D. 1884 O, p. 782.
 Nicholson and Lydekker 1889 A, p. 1147.
 Zittel, K. A. 1890 A, p. 630.

Ogmophis angulatus Cope.

Cope, E. D. 1873 CC, p. 16. (Calamagras.)
 1874 B, p. 518. (Calamagras.)

Cope, E. D. 1884 O, p. 783, pl. lviii, fig. 12.
 Oligocene (White River); Colorado.

Ogmophis oregonensis Cope.

Cope, E. D. 1884 O, p. 783, pl. lviii, figs. 9-11.
 Miocene (John Day); Oregon.

COLUBRIDÆ.

Gray, J. E. 1849, Cat. Snakes, p. 2.
 Boulenger, G. A. 1893 A.
 1894 A.
 1896 C.

Cope, E. D. 1886 V, p. 484.
 1900 A, p. 732.
 Gadow, H. 1898 A, p. 28.
 Hoffmann, C. K. 1890 C, p. 1683.
 Stannius, H. 1856 A. (Colubrina.)

COLUBER Linn.

Linnaeus, C. 1758, Syst. Nat., ed. x, p. 216.
 Boulenger, G. A. 1894 A, p. 24.
 Cope, E. D. 1900 A, p. 825.

Coluber sp. indet.

Wheatley, C. M. 1871 A.
 Pleistocene; Pennsylvania.

BASCANION Baird and Girard. Type *Coluber constrictor* Linn.

Baird and Girard, 1853, Cat. N. Amer. Rept., p. 93.
 Boulenger, G. A. 1893 A, p. 379. (Zamenis, in part.)
 Cope, E. D. 1900 A, p. 787. (Zamenis, in part.)

Bascanion acuminatus (Cope).

Cope, E. D. 1899 A, p. 197. (Zamenis.)
 Pleistocene; Pennsylvania.

CROTALIDÆ.

Boulenger, G. A. 1896 C, p. 519. (Crotalinæ.)
 Cope, E. D. 1886 V, pp. 480-498.
 1892 O.
 1900 A, p. 1130.
 Giebel, C. G. 1866 B.

Hoffmann, C. K. 1890 C, p. 1798.
 Roehrburne, A. T. 1881 A, p. 216. ("Crotaliens.")
 Stannius, H. 1856 A. (Crotalina.)
 Troschel, F. H. 1861 A. (Crotalina.)

CROTALUS Linn. Type *C. horridus* Linn.*Linnæus, C.*, 1758, Syst. Nat., ed. x, p. 214.

Boulenger, G. A. 1896 C, p. 572.

Cope, E. D. 1900 A, p. 1149.

Crotalus horridus Linn.*Linnæus, C.*, 1758, Syst. Nat., ed. x, p. 214.

Cope, E. D. 1900 A, p. 1185.

Green, J. 1821 A.

Wheatley, C. M. 1871 A.

Pleistocene; Pennsylvania, New Jersey.

NEURODROMICUS Cope. Type *N. dorsalis* Cope.

Cope, E. D. 1873 CC, p. 15.

1874 B, p. 516.

1884 O, p. 785.

Hoffmann, C. K. 1890 C, p. 1814. (Neurodromus.)

Nicholson and Lydekker 1889 A, p. 1148.

Zittel, K. A. 1890 A, p. 631.

Neurodromicus dorsalis Cope.

Cope, E. D. 1873 CC, p. 15.

1874 B, p. 517.

1884 O, p. 786, pl. lviii, figs. 7, 8.

Oligocene (White River); Colorado.

HELAGRAS Cope. Type *H. prisciformis* Cope.

Cope, E. D. 1883 M, p. 545.

1883 W.

1884 O, p. 730.

Nicholson and Lydekker 1889 A, p. 1146.

Zittel, K. A. 1890 A, p. 632.

A genus of uncertain position.

Helagras prisciformis Cope.

Cope, E. D. 1883 M, p. 545.

1883 W.

1884 O, p. 731, pl. xxivg. fig. 2.

1888 CC, p. 302.

Zittel, K. A. 1890 A, p. 632.

Eocene (Puerco); New Mexico.

CONIOPHIS Marsh. Type *C. precedens* Marsh.

Marsh, O. C. 1892 E, p. 450.

A genus of uncertain affinities.

Coniophis precedens Marsh.

Marsh, O. C. 1892 E, p. 450, figs. 1a-e.

Walcott, C. D. 1900 A, p. 23.

Cretaceous (Laramie); Wyoming.

Order DINOSAURIA Owen.

Owen, R. 1842 A, p. 102.

Baur, G. 1883 A.

1884 A.

1884 B.

1884 E.

1885 C.

1885 E.

1887 A, p. 487.

1887 C, p. 101.

1887 S, p. 333.

1891 C, p. 354.

1891 D.

Bueckhardt, R. 1895 A.

Cannon, G. L. 1888 A, pp. 140, 190.

Cope, E. D. 1869 M, pp. 33, 86.

1871 B, p. 234.

1872 Q.

1877 G, p. 588.

1878 K.

1879 A, p. 38.

1882 J, p. 981.

1882 Q.

1883 J, p. 97.

1883 DD.

1885 G, p. 246.

1886 E.

1889 R, p. 864.

Cope, E. D. 1891 N, p. 41.

1892 R.

1892 Z, p. 17.

1898 B, pp. 56, 68.

1900 A, p. 160.

Dames, W. 1884 A.

Dawkins, W. B. 1871 A.

Dollo, L. 1882 B.

1883 B.

1883 C.

1884 B.

1888 E.

Fürbringer, M. 1888 A.

1900 A, pp. 347, 535, 651.

Gadow, H. 1897 A, p. 204.

1898 A, p. 22.

Gegenbaur, C. 1898 A.

Günther, A. 1866 A, p. 442.

Haeckel, E. 1895 A, p. 374.

Hay, O. P. 1899 F, p. 682.

Hoffmann, C. K. 1890 B.

Hulke, J. W. 1883 A.

1883 B.

1884 A.

Huxley, T. H. 1868 A, p. 362.

1870 A, p. 438.

1870 C.

- Huxley, T. H. 1870 D.
 1872 A, p. 223. (Ornithoscelida.)
 1875 B.
 1876 B, xiii, p. 515.
- Kehner, F. A. 1876 A.
- Lydekker, R. 1888 A.
 1888 B, p. 131.
 1893 E, p. 139.
- Marsh, O. C. 1877 E.
 1878 F.
 1879 B.
 1880 D.
 1881 E.
 1881 H.
 1882 A.
 1884 A.
 1884 B.
 1884 G.
 1885 D.
 1889 B.
 1895 B.
 1895 C.
 1896 A.
 1896 C.
 1896 D.
- Morse, E. S. 1880 A, p. 3.
- Nicholson and Lydekker 1889 A, p. 1151.
- Osborn, H. F. 1899 H, p. 161.
 1900 G, p. 777.
- Owen, R. 1854 B, p. 1.
 1860 A, p. 164.
 1860 E, p. 257.
 1866 A, p. 18.
 1875 C.
- Parker, W. K. 1887 A, p. 331.
- Pictet, F. J. 1853 A, p. 466. ("Dinosauriens.")
- Quenstedt, F. A. 1852 A, p. 111.
- Seeley, H. G. 1879 A.
 1887 B.
 1888 B.
 1888 C.
 1888 G.
- Steinmann and Döderlein 1890 A, p. 658.
- Tomes, C. S. 1898 A, p. 287.
- Vetter, B. 1885 A.
- White, C. A. 1883 A.
- Wiedersheim, R. 1881 A, p. 366.
- Woodward, A. S. 1898 B, p. 196.
- Zittel, K. A. 1890 A, pp. 450, 689, 767.

SUBORDER OPISTHOCELIA Owen.

Owen, R. 1860 A, p. 164.

Unless otherwise indicated, the following authors employ the term *Sauropoda* for this group.

- Baur, G. 1883 A.
 1884 A.
 1887 C, p. 101. (Opisthocœlia.)
 1891 D, p. 451. (Cetiosauria.)
- Cope, E. D. 1882 Q. (Sauropoda a synonym of Opisthocœlia.)
 1883 J, p. 98. (Opisthocœlia.)
 1889 E.
 1889 R, p. 864. (< Saurischia.)
 1891 N, p. 43. (< Saurischia.)
 1898 B, p. 68. (< Saurischia.)
- Dollo, L. 1884 B.
 1892 C, p. 10.
- Fürbringer, M. 1900 A.
- Gadow, H. 1897 A, p. 204.
 1898 A, p. 22.
- Hæckel, E., 1895 A, pp. 382, 386.
- Hulke, J. W. 1879 A.
 1880 A.
 1882 A.
- Huxley, T. H. 1867 A, p. 415.
 1869 B.
- Lydekker, R. 1886 C, p. 275.
 1888 A, p. 53.
- Lydekker, R. 1888 B, p. 131.
- Marsh, O. C. 1878 F, p. 412.
 1879 B.
 1881 E.
 1882 A, p. 83.
 1883 A, pp. 82, 85.
 1884 A.
 1884 G.
 1885 D.
 1889 B, p. 324.
 1896 C, pp. 164, 241.
 1896 D, p. 207.
 1898 C.
- Nicholson and Lydekker 1889 A, p. 1170.
- Osborn, H. F. 1898 J, p. 221. (Cetiosauria.)
 1900 G, p. 786. (Cetiosauria.)
- Owen, R. 1875 C, p. 27. (Cetiosaurus.)
- Science 1885 B.
- Seeley, H. G. 1888 B. (< Saurischia.)
 1888 C, p. 86. (Cetiosauria.)
 1888 G, p. 171. (< Saurischia.)
 1892 A, p. 349. (< Saurischia.)
- Steinmann and Döderlein 1890 A, p. 661.
- Vetter, B. 1885 A, p. 117.
- Woodward, A. S. 1898 B, p. 200.
- Zittel, K. A. 1890 A, pp. 693, 702.

MOROSAURIDÆ.

- Marsh, O. C. 1882 A, p. 83.
- Baur, G. 1895 A, p. 1001.
 1896 A, p. 145.
- Lydekker, R. 1888 B, p. 133. (Cetiosauridæ.)
 1889 C, p. 59. (Cetiosaurus.)
 1889 J. (On Cardiodon).
 1890 A, p. 236. (< Cetiosauridæ.)
- Marsh, O. C. 1883 A, p. 85.
 1884 A.
- Marsh, O. C. 1884 G.
 1885 D.
 1888 A, p. 92. (Pleurocœlidæ.)
 1889 B, p. 324. (Morosauridæ, Cetiosauridæ, Pleurocœlidæ.)
 1895 C, p. 495 (Morosauridæ); p. 496 (Pleurocœlidæ).
 1896 C, p. 241 (Morosauridæ); p. 242 (Pleurocœlidæ, Cardiodontidæ).

- Marsh, O. C. 1896 D, p. 208. (Morosauridae, Pleurocœlidæ.)
 1896 F, p. 435.
 1897 C, p. 496.
 1898 C, p. 488. (Morosauridae, Pleurocœlidæ.)
 Nicholson and Lydekker 1889 A, p. 1177. (<Cetiosauridae.)

- Owen, R. 1841 E, p. 457. (Cetiosaurus.)
 1859 D, p. 27. (Cetiosaurus.)
 Pictet, F. J. 1853 A, p. 493. (Cetiosaurus.)
 Steinmann and Döderlein 1890, A, p. 663.
 Williston, S. W. 1895, A, p. 169.
 Williston and Case 1892 A, p. 16.
 Zittel, K. A. 1890 A, p. 709.

MOROSAURUS Marsh. Type *M. impar* Marsh.

- Marsh, O. C. 1878 B, p. 242.
 Baur, G. 1883 A, p. 433.
 Giebel, C. G. 1879 A, p. 317.
 Hulke, J. W. 1888 A, p. 425.
 Krause, W. 1881 A.
 Lydekker, R. 1888 A, p. 59.
 1888 B, p. 134.
 1889 C, p. 59.
 1890 A, p. 236.
 Marsh, O. C. 1878 F, p. 412.
 1879 B.
 1883 A, p. 82.
 1884 A.
 1888 A, p. 90.
 1895 C, p. 495.
 1896 C, p. 181.
 1897 C, p. 496.
 Nicholson and Lydekker 1889 A, pp. 1177, 1179.
 Osborn, H. F. 1898 J, p. 221.
 1899 H, p. 168.
 1900 G, p. 787.
 Steinmann and Döderlein 1890 A, p. 663.
 Wiedersheim, R. 1881 A.
 Williston, S. W. 1895 A, p. 165.
 1898 F.
 Zittel, K. A. 1890 A, p. 709.

Morosaurus agilis Marsh.

- Marsh, O. C. 1889 C, p. 334, fig. 3.
 1896 C, pl. xxx, fig. 1; pl. xxxvii, figs. 1, 2.
 Osborn, H. F. 1899 H, p. 170, fig. 6.
 Jurassic; Colorado.

Morosaurus grandis Marsh.

- Marsh, O. C. 1877 G, p. 515. (Apatosaurus.)

PLEUROCÆLUS Marsh.

- Marsh, O. C. 1888 A, p. 90.
 Lydekker, R. 1888 B, p. 134.
 1890 A, p. 237.
 1890 B, p. 182, pl. ix.
 Marsh, O. C. 1895 C, p. 490.
 1896 C, p. 183.
 1897 E, p. 415.
 1898 C, p. 488.
 Nicholson and Lydekker 1889 A, p. 1179.
 Zittel, K. A. 1890 A, p. 714.

Pleurocœlus altus Marsh.

- Marsh, O. C. 1888 A, p. 92.
 Jurassic (Potomac); Maryland.

EPANTERIAS Cope. Type *E. amplexus* Cope.

- Cope, E. D. 1878 V, p. 406.
 Zittel, K. A. 1890 A, p. 709.

- King, C. 1878 A, p. 346. (Apatosaurus.)
 Lydekker, R. 1888 B, p. 133, figs. 20, 21.
 Marsh, O. C. 1878 F, p. 514, pls. v-vii.
 1879 B, pls. iii, v, vii.
 1880 C, p. 254.
 1883 A, pp. 83, 85.
 1896 C, p. 181, pl. xxx, figs. 2, 3; pl. xxxi, pl. xxxii, figs. 4-6; pl. xxxiv, figs. 1, 5-7, pl. xxxv, fig. 3; pl. xxxviii: pl. xxxix, figs. 4, 5; text figs. 31-33.
 1897 C, p. 497, figs. 49-51.
 Williston, S. W. 1898 F, figs. 1, 2.
 Zittel, K. A. 1890 A, p. 709, figs. 614-617.
 Jurassic; Wyoming?, Colorado.

Morosaurus impar Marsh.

- Marsh, O. C. 1878 B, p. 242.
 King, C. 1878 A, p. 346.
 Jurassic; "Rocky Mountain region."

Morosaurus lentus Marsh.

- Marsh, O. C. 1889 C, p. 333, fig. 2.
 1895 C, p. 488, fig. 8.
 1896 C, p. 182, pl. xxxii, figs. 1, 2; pl. xxxiii; pl. xxxiv, figs. 3, 4; pl. xxxv, fig. 4; pl. xxxvi, fig. 1; pl. xxxvii, figs. 3-5; text figs. 34, 63.
 1896 D, p. 20, fig. 8.
 Jurassic; Wyoming.

Morosaurus robustus Marsh.

- Marsh, O. C. 1878 F, p. 414, pl. viii.
 1879 H, p. 503.
 1896 C, pl. xxxv, figs. 1, 2.
 Jurassic; Wyoming.

Type *P. nanus* Marsh.

Pleurocœlus montanus Marsh.

- Marsh, O. C. 1896 C, p. 184, figs. 35-41.
 Walcott, C. D. 1900 A, p. 23.
 Formation and locality not given.

Pleurocœlus nanus Marsh.

- Marsh, O. C. 1888 A, p. 90, figs. 1-6.
 Lydekker, R. 1890 A, p. 238, fig. 52.
 Marsh, O. C. 1896 C, pls. xl, xli.
 Jurassic (Potomac); Maryland.

Epanterias amplexus Cope.

- Cope, E. D. 1878 V, p. 406.
 Jurassic; Colorado.

CAULODON Cope. Type *C. diversidens* Cope.

Cope, *E. D.* 1877 F, p. 193.

Nicholson and Lydekker, 1889 A, p. 1176.

Zittel, K. A. 1890 A, p. 711.

The position of this genus is doubtful.

Caulodon diversidens Cope.

Cope, *E. D.* 1877 F, p. 193.

1878 I, p. 247.

Osborn, H. F. 1898 J, p. 227.

Jurassic; Colorado.

Caulodon leptoganus Cope.

Cope, *E. D.* 1878 I, p. 247.

Jurassic; Colorado.

SYMPHYRAPHUS Cope. Type *S. musculosus* Cope.

Cope, *E. D.* 1878 I, p. 246.

1878 H, p. 391.

1878 M, p. 84.

Zittel, K. A. 1890 A, p. 726.

A genus of doubtful position.

Symphyrphus musculosus Cope.

Cope, *E. D.* 1878 I, p. 246.

1878 H, p. 391.

Osborn, H. F. 1898 J, p. 227.

Jurassic; Colorado.

ASTRODON Johnston. Type *A. johnstoni* Leidy.

Johnston, C., in Leidy, J. 1865 A, p. 102.

1859 A, p. 341. (Name; no description.)

Marsh, O. C. 1896 C, p. 242.

1898 C, p. 488.

Zittel, K. A. 1890 A, p. 717.

A genus of uncertain affinities.

Astrodon johnstoni Leidy.

Leidy, J. 1865 A, pp. 102, 119, pl. xiii, figs. 20-23;
pl. xx, fig. 10.

Bibbins, A. 1895 A, p. 19, fig. H. (This species?)

Cope, *E. D.* 1869 M, p. 99.

Marsh, O. C. 1896 C, p. 164, text fig. 6.

Jurassic (Potomac); Maryland.

ATLANTOSAURIDÆ.

Marsh, O. C. 1877 G, p. 514.

Cope, *E. D.* 1877 R, p. 3. (Camarasauridæ, Amphice-
celiidæ.)

1878 I, p. 243. (Camarasauridæ, Amphice-
celiidæ.)

1883 J, p. 99. (Camarasauridæ.)

1898 B, p. 68. (Cetiosauridæ.)

Günther, A. 1886 A, p. 443.

Lydekker, R. 1888 B, p. 143.

Marsh, O. C. 1878 B, p. 240.

1882 A, p. 83.

1883 A, pp. 82, 85.

Marsh, O. C. 1884 A, p. 167.

1885 D.

1889 B.

1893 B.

1895 C, p. 495.

1896 C, pp. 166, 241.

1896 D, p. 208.

1897 C, p. 494.

1898 C, p. 487.

Nicholson and Lydekker 1889 A, p. 1173.

Steinmann and Döderlein 1890 A, p. 662.

Zittel, K. A. 1890 A, p. 705.

ATLANTOSAURUS Marsh. Type *Titanosaurus montanus* Marsh.

Marsh, O. C. 1877 G, p. 514. (To replace *Titano-*
saurus Marsh, preoccupied.)

Cope, *E. D.* 1878 I, p. 237.

Giebel, C. G. 1879 A, p. 318.

Hulke, J. W. 1879 A.

Lydekker, R. 1888 B, p. 144.

Marsh, O. C. 1877 C. (*Titanosaurus*, type *T.*
montanus.)

1877 E.

1878 G, p. 224.

1879 B, p. 88, pls. vi, vii.

1895 C, p. 495.

1896 C, p. 166.

1897 C, p. 485.

Nicholson and Lydekker 1889 A, p. 1173.

Osborn, H. F. 1898 J, p. 219 *et seq.*

Steinmann and Döderlein 1890 A, p. 662.

Zittel, K. A. 1890 A, p. 705.

Atlantosaurus immanis Marsh.

Marsh, O. C. 1878 B, p. 241.

Barbour, E. H. 1890 B, p. 392, figs. 3, 4.

King, C. 1878 A, p. 346.

Lydekker, R. 1888 B, p. 145.

Marsh, O. C. 1879 B, p. 89, pl. vii.

1896 C, p. 166, pl. xvi.

1897 C, pp. 488, 526, figs. 34-35a.

Nicholson and Lydekker 1889 A, p. 1174.

Jurassic; Wyoming, Colorado.

Atlantosaurus montanus Marsh.

Marsh, O. C. 1877 C. (*Titanosaurus*.)

Cope, *E. D.* 1877 Q, p. 6. (No name.)

1878 I, p. 237. (*Titanosaurus*.)

King, C. 1878 A, p. 346.

Marsh, O. C. 1877 E.

1879 B, p. 88, pl. vi,

1896 C, p. 166, pl. xv; pl. xvii, fig. 1.

1897 C, p. 487, fig. 33.

Osborn, H. F. 1898 J, p. 228, fig. 7 B.

Williston, S. W. 1878 A, p. 43. (*Titanosaurus*.)

Jurassic; Colorado.

APATOSAURUS Marsh. Type *A. ajax* Marsh.

Marsh, O. C. 1877 G, p. 514.

Giebel, C. G. 1879 A, p. 317.

Marsh, O. C. 1879 B, p. 86.

1883 A, p. 82.

1895 C, p. 495.

1896 C, p. 166.

1897 C, p. 489.

Nicholson and Lydekker 1889 A, p. 1173.

Osborn, H. F. 1898 J, p. 219 *et seq.*

Zittel K. A. 1890 A, p. 706.

Apatosaurus ajax Marsh.

Marsh, O. C. 1877 G, p. 514.

King, C. 1878 A, p. 346.

Marsh, O. C. 1879 B, p. 87, pl. iv; pl. vi, fig. 1.

1896 C, p. 168, pl. xviii, figs. 2, 3; text figs. 7, 8.

1897 C, pp. 490, 526, figs. 37, 38.

Osborn, H. F. 1898 J, p. 228, figs. 7 B, 9.

Jurassic; Colorado.

Apatosaurus laticollis Marsh.

Marsh, O. C. 1879 B, p. 88, pl. iii, figs. 1, 2.

Barbour, E. H. 1890 B, p. 390, figs. 1, 2.

Marsh, O. C. 1896 C, pl. xviii, fig. 1; pl. xix, fig. 1.

1897 C, pp. 490, 526, fig. 36.

Zittel, K. A. 1890 A, p. 706, fig. 609.

Jurassic; Colorado.

BAROSAURUS Marsh. Type *B. lentus* Marsh.

Marsh, O. C. 1890 A, p. 85, pl. i, figs. 1, 2.

1895 C, p. 495.

1896 C, p. 174.

1898 C, p. 488.

Zittel, K. A. 1890 A, p. 716.

Barosaurus affinis Marsh.

Marsh, O. C. 1899 A, p. 228. (No description.)

Jurassic; Wyoming.

Barosaurus lentus Marsh.

Marsh, O. C. 1890 A, p. 85, text figs. 1, 2.

1896 C, p. 174, text figs. 24-26.

1899 A, p. 228.

Jurassic; South Dakota.

BRONTOSAURUS Marsh. Type *B. excelsus* Marsh.

Marsh, O. C. 1879 H, p. 503.

Fürbringer, M. 1900 A, p. 352.

Hulke, J. W. 1883 A, p. 62.

1888 A, p. 425.

Lydekker, R. 1888 A, p. 55.

1893 E, p. 139.

Marsh, O. C. 1880 D, p. 395.

1881 E, p. 417, pls. xli-xviii.

1883 A.

1891 C, p. 341, pl. xvi.

1895 C, p. 495.

1896 C, p. 168.

1897 C, p. 492.

Nicholson and Lydekker 1889 A, p. 1173.

Osborn, H. F. 1898 J, p. 219 *et seq.*

1899 E, pp. 205, 207, 213.

1899 H, p. 162, fig. 1 B, p. 171, fig. 7.

1900 G, p. 788.

Steinmann and Döderlein 1890 A, p. 662.

Woodward, A. S. 1898 B, p. 201.

Zittel, K. A. 1890 A, p. 706.

Brontosaurus amplus Marsh.

Marsh, O. C. 1881 E, p. 421.

Marsh, O. C. 1896 C, p. 173, text figs. 17, 20, 29.

Jurassic; Wyoming.

Brontosaurus excelsus Marsh.

Marsh, O. C. 1879 H, p. 503.

Fürbringer, M. 1900 A, p. 353, fig. 124.

Geinitz and Deichmüller 1882 A.

Hutchison, H. N. 1893 A, p. 66, pl. iv.

Lydekker, R. 1888 B, p. 144, fig. 23.

1893 B, p. 302, fig. 1.

Marsh, O. C. 1880 D, p. 395, pl. xviii.

1881 E, p. 417, pls. xii-xviii.

1883 A, pl. i.

1891 C, p. 341, pl. xvi.

1893 I, p. 437.

1895 C, pl. x, fig. 2.

1896 C, p. 169, pls. xx-xxiv; pl. xlii; text figs. 9-16, 21-23.

1896 D, pl. i, fig. 2.

1897 C, p. 492, pl. xxi, text figs. 39-43.

Osborn, H. F. 1898 J, 223 *et seq.*, figs. 6, 7 C, 8, 12.

Woodward, A. S. 1898 B, p. 201, figs. 121, 122.

Zittel, K. A. 1890 A, p. 707, figs. 610-613.

Jurassic; Wyoming, Colorado.

CAMARASAURUS Cope. Type *C. supremus* Cope.

Cope, E. D. 1877 A.

1877 W.

1878 E.

1878 I, pp. 233, 234.

1878 M.

1878 V.

1879 A, p. 35.

Hulke, J. W. 1879 A.

1880 A.

Hulke, J. W. 1882 A.

Lydekker, R. 1888 A, p. 54.

Marsh, O. C. 1895 C, p. 495.

1898 C, p. 488.

Osborn, H. F. 1898 J, p. 219.

1900 G, pp. 786, 788.

Owen, R. 1878 D.

Zittel, K. A. 1890 A, p. 711. (Camarosaurus.)

Camarasaurus leptodirus Cope.

Cope, *E. D.* 1879 R, p. 403, figs. 1-3.
Jurassic; Colorado.

Camarasaurus supremus Cope.

Cope, *E. D.* 1877 Q.
1877 W.
1878 E.

Cope, *E. D.* 1878 I, p. 237, figs. 1-12.
1878 M, figs. 1-12.
1891 N, p. 43, fig. 21.
1898 B, p. 68, fig. 22, A. B.

Marsh, O. C. 1879 B, p. 89.

Osborn, H. F. 1898 J, p. 227 *et seq.*, figs. 10, 11.

Williston, S. W. 1878 A, p. 43.

Zittel, K. A. 1890 A, p. 712, fig. 618.
Jurassic; Colorado.

AMPHICELIAS Cope. Type *A. altus* Cope.

Cope, *E. D.* 1877 R.
1878 I, p. 242.
1878 M.

Lydekker, R. 1888 A, p. 54.

Marsh, O. C. 1881 E, p. 419. (Syn. of *Brontosaurus*.)

1896 C, p. 241. (Syn. of *Camarasaurus*.)

1898 C, p. 488.

Osborn, H. F. 1898 J, p. 219 *et seq.*

Zittel, K. A. 1890 A, p. 709.

Amphicelias altus Cope.

Cope, *E. D.* 1877 R, p. 3.
1878 I, p. 243, figs. 13-15.
1878 M, figs. 13-17.
1879 X, p. 798 a.

Cope, *E. D.* 1898 B, p. 69, fig. 22, C.
Jurassic; Colorado.

Amphicelias fragillimus Cope.

Cope, *E. D.* 1878 Y, figure.

1881 BB, p. 413. (A. *fragillissimus*; syn. ? of *Cœlurus fragilis*.)

1884 W. (A. *fragillissimus*.)

1898 B, p. 68. (A. *fragillissimus*.)

Jurassic; Colorado.

Amphicelias latus Cope.

Cope, *E. D.* 1873 R, p. 4.
1878 I, p. 245, figs. 17, 18.
Jurassic; Colorado.

DIPLODOCIDÆ.

Marsh, O. C. 1884 A.
1884 G.
1885 D.
1889 B, p. 324.
1895 C, p. 495.

Marsh, O. C. 1896 C, p. 241.
1896 D, p. 208.
1898 C, p. 488.

Nicholson and Lydekker 1889 A, p. 1176.

Zittel, K. A. 1890 A, p. 714.

DIPLODOCUS Marsh. Type *D. longus* Marsh.

Marsh, O. C. 1878 F, p. 414.

Baur, G. 1891 D, p. 445.

Cope, *E. D.* 1884 W.

Dollo, L. 1884 B.

Giebel, C. G. 1879 A, p. 317.

Hatcher, J. B. 1900 A, p. 718.

1900 B, p. 828.

Holland, W. J. 1900 A, p. 816.

Lydekker, R. 1888 A, p. 53.

Marsh, O. C. 1880 C, p. 255, pl. vi, figs. 4, 5.
(*Stegosaurus armatus, errore.*)

1883 A, p. 85.

1884 A.

1895 C, p. 495.

1896 C, p. 175.

1897 C, p. 494.

Nicholson and Lydekker 1889 A, p. 1176.

Osborn, H. F. 1898 J, p. 221.

1899 C, p. 315.

1899 E.

1899 H, p. 165, fig. 1 A.

1900 G, pp. 787, 790, fig. 8.

Steinmann and Döderlein 1890 A, p. 662.

Woodward, A. S. 1898 B, p. 204.

Zittel, K. A. 1890 A, p. 714.

Diplodocus lacustris Marsh.

Marsh, O. C. 1884 A, p. 164.

Jurassic; Colorado.

Diplodocus longus Marsh.

Marsh, O. C. 1878 F, p. 414, pl. viii, figs. 3, 4.

Cope, *E. D.* 1884 W.

Hatcher, J. B. 1900 B, p. 828. ("Diplodocus.")

Holland, W. J. 1900 A, p. 816. ("Diplodocus.")

Lydekker, R. 1888 B, p. 132, fig. 19.

Marsh, O. C. 1884 A, p. 168, pls. iii, iv.

1896 C, p. 175, pls. xxv-xxix, fig. 1; pl.

xxxix, fig. 5, text figs. 27-29.

1897 C, p. 495, figs. 44-48.

Osborn, H. F. 1899 E, p. 191, pls. xxiv-xxviii, text figs. 1-8, 11-14.

Walcott, C. D. 1900 A, p. 23.

Woodward, A. S. 1898 B, p. 204, fig. 124.

Zittel, K. A. 1890 A, p. 715, figs. 620-622.

Jurassic; Wyoming, Colorado.

Suborder THEROPODA Marsh.

- Marsh, O. C. 1881 E, p. 423.
 Baur, G. 1883 A, p. 441. (Theropoda.)
 1887 C, p. 101. (Goniopoda.)
 1891 D, p. 451. (Megalosauria.)
 Cope, E. D. 1866 E, p. 317. (Goniopoda.)
 1867 D. (>Symphypoda.)
 1869 M, p. 99 (Goniopoda); p. 120 (Symphypoda).
 1871 B, p. 234. (Goniopoda, Symphypoda.)
 1882 Q. (Goniopoda.)
 1883 J, p. 98. (Goniopoda.)
 1889 R, p. 864. (<Saurischia.)
 1891 N, p. 43. (<Saurischia.)
 1898 B, p. 68. (<Saurischia.)
 Dollo, L. 1892 C, p. 12. ("Théropodes.")
 Fitzinger, L., 1843, Syst. Rept., p. 35. (Fam. Megalosauri.)
 Fürbringer, M. 1888 A.
 1900 A.
 Gadow, H., 1897 A, p. 204.
 1898 A, p. 22.

- Günther, A. 1886 A, p. 443.
 Haeckel, E. 1895 A, p. 384.
 Huxley, T. H. 1870 D, p. 35.
 Lydekker, R. 1888 A, p. 59.
 1888 B, p. 154.
 Marsh, O. C. 1882 A, p. 84.
 1884 B.
 1884 G.
 1885 D, p. 764.
 1889 B, p. 329.
 1895 C, p. 492.
 1896 C, pp. 146, 239.
 1896 D, p. 205.
 Nicholson and Lydekker 1889 A, p. 1164.
 Seeley, H. G. 1888 B. (<Saurischia.)
 1892 A, p. 349. (<Saurischia.)
 Steinmann and Döderlein 1890 A, p. 659.
 Vetter, B. 1885 A, p. 117.
 Woodward, A. S. 1898 B, p. 197.
 Zittel, K. A. 1890 A, pp. 450, 693, 717.

MEGALOSAURIDÆ.

- Huxley, T. H. 1870 D, p. 34.
 Baur, G. 1883 A, p. 440.
 Cope, E. D. 1868 C, p. 417. (Dinodontidæ.)
 1869 M, p. 117. (Dinodontidæ.)
 1889 R, p. 864.
 1898 B, p. 68.
 Dawkins, W. B. 1871 A.
 Lydekker, R. 1888 B, p. 157.
 Marsh, O. C. 1879 B, p. 89. (Allosauridæ.)
 1881 E, p. 423. (Allosauridæ.)
 1882 A, pp. 84, 85. (Megalosauridæ, Labrosauridæ.)
 1884 B, p. 337. (Megalosauridæ, Labrosauridæ.)
 1884 G. (Megalosauridæ, Labrosauridæ.)

- Marsh, O. C. 1885 D, p. 764. (Megalosauridæ, Labrosauridæ.)
 1890 C, p. 424. (Dryptosauridæ.)
 1895 C, p. 493. (Megalosauridæ, Dryptosauridæ, Labrosauridæ.)
 1896 C, pp. 203, 239. (Megalosauridæ, Dryptosauridæ, Labrosauridæ.)
 1896 D, p. 206. (Megalosauridæ, Dryptosauridæ, Labrosauridæ.)
 Nicholson and Lydekker 1889 A, p. 1167.
 Owen, R. 1883 B.
 Seeley, H. G. 1894 A.
 Steinmann and Döderlein, 1890 A, p. 660.
 Zittel, K. A. 1890 A, p. 722.

MEGALOSAURUS Buckland.

- Buckland, W. 1824 A.
 Bronn, H. G. 1837 A, p. 530, pl. xxxiv, fig. 1.
 Cope, E. D. 1868 K, p. 239. (Megalosaurus, Pœkilopleuron.)
 1869 M, p. 100. (Pœkilopleuron); p. 108 (Megalosaurus).
 Deslongchamps-Eudes, J. A. 1838 A, p. 36. (Pœkilopleuron, type *P. bucklandi*, in part.)
 Gaudry, A. 1890 C, p. 227.
 Hulke, J. W. 1879 B.
 Huxley, T. H. 1869 D.
 1870 D.
 Lydekker, R. 1888 B, p. 159.
 Marsh, O. C. 1895 A, p. 408.

Type *M. bucklandi* Meyer.

- Osborn, H. F. 1900 G, p. 786.
 Owen, R. 1842 A, p. 103.
 1845 B, p. 269.
 1856 A.
 1860 E, p. 258.
 1876 C. (Pœkilopleuron.)
 1883 B, pl. xi.
 Pictet, F. J. 1853 A, p. 467 (Megalosaurus); p. 497 (Pœkilopleuron).
 Quenstedt, F. A. 1852 A, p. 112.
 Zittel, K. A. 1890 A, p. 722.
 No species of this genus is at present known from this country.

DRYPTOSAURUS Marsh. Type *Laelaps aquilunguis* Cope.

- Marsh, O. C. 1877 C, p. 88. (To replace *Laelaps* Cope, preoccupied.)
 Unless otherwise indicated the following writers refer to this genus under name *Laelaps*.

- Baur, G. 1883 A, p. 441.
 Cope, E. D. 1866 A. (*Laelaps*, type *L. aquilunguis*).
 1866 E.
 1867 D.

Cope, E. D. 1868 C.

1868 K, p. 237.

1869 M, p. 100.

1871 B, p. 239.

1876 I, p. 340.

1877 H, p. 806.

1877 T.

1878 K.

1892 Z, p. 17, pl. iii.

Huxley, T. H. 1870 C.

Leidy, J. 1868 F, p. 199.

Lippincott, J. S. 1881 A.

Lydekker, R. 1888 B, pp. 159, 169. (*Dryptosaurus*.)

Marsh, O. C. 1895 C, p. 493.

1896 C, p. 203.

1896 D.

Morse, E. S. 1880 A, p. 4.

Osborn, H. F. 1893 B, p. 326.

Zittel, K. A. 1890 A, p. 726.

***Dryptosaurus aquilunguis* (Cope).**

Cope, E. D. 1866 A. (*Laelaps*.)

1866 B. (*Laelaps aquilunguis*, part; *L. macropus*, part.)

1866 E. (*Laelaps*.)

1867 E, p. 27. (*Laelaps*.)

1868 C. (*Laelaps*.)

1868 K, p. 237. (*Laelaps*.)

1869 B, p. 737. (*Laelaps*.)

1869 K, p. 91, pl. ii. (*Laelaps*.)

1869 M, pp. 100, 118, 122 J, pls. viii, ix; pl. x, figs. 1-6. (*Laelaps*.)

1870 K. (*Laelaps*.)

1875 E, p. 249. (*Laelaps*.)

1877 T. (*Laelaps*.)

Lucas, F. A. 1893 C, p. 97.

Lydekker, R. 1888 B, p. 170.

Marsh, O. C. 1877 C, p. 88.

Osborn, H. F. 1898 N, pp. 843, 844, fig. 3. (*Megalosaurus*.)

1898 Q, pp. 6, 19, pl. iii. (*Megalosaurus*.)

Cretaceous; New Jersey.

***Dryptosaurus cristatus* (Cope).**

Cope, E. D. 1876 I, p. 344. (*Laelaps*.)

1877 G, p. 572. (*Laelaps*.)

Cretaceous; Montana.

***Dryptosaurus explanatus* (Cope).**

Cope, E. D. 1876 H, p. 249. (*Laelaps*.)

1877 G, p. 572. (*Laelaps*.)

Cretaceous; Montana.

***Dryptosaurus falcus* (Cope).**

Cope, E. D. 1876 H, p. 249. (*Laelaps*.)

1877 G, p. 572. (*Laelaps*.)

Cretaceous; Montana.

***Dryptosaurus hazenianus* (Cope).**

Cope, E. D. 1876 I, p. 343. (*Laelaps*.)

1877 G, p. 572. (*Laelaps*.)

Cretaceous; Montana.

***Dryptosaurus incrassatus* (Cope).**

Cope, E. D. 1876 H, p. 248. (*Laelaps*.)

1876 I, pp. 340, 341. (*Laelaps*.)

1877 G, p. 572. (*Laelaps*.)

1877 T. (*Laelaps*.)

1892 K, p. 240. (*Laelaps*.)

1892 Z, p. 17, pl. iii. (*Laelaps*.)

Hay, O. P. 1899 G, p. 348.

Lambe, L. M. 1899 A, pp. 69, 70. (*Laelaps*.)

Cretaceous; Montana, British America.

***Dryptosaurus kenabekides* Hay.**

Hay, O. P. 1899 G, p. 348.

Leidy, J. 1856 F, p. 72. (*Deinodon horridus*, in part.)

1860 A, p. 143 (in part), pl. ix, figs. 21-34. (*Deinodon horridus*.)

1868 F, p. 198. (*Deinodon horridus*.)

Cretaceous (Laramie); Montana.

***Dryptosaurus lævifrons* (Cope).**

Cope, E. D. 1876 I, p. 344. (*Laelaps*.)

1877 G, p. 572. (*Laelaps*.)

Cretaceous; Montana.

***Dryptosaurus macropus* (Cope).**

Cope, E. D. 1868 C, p. 417. (*Laelaps*.)

1866 B. (*L. aquilunguis*, in part.)

1869 B, p. 737. (*Laelaps*.)

1869 M, p. 118, figs. 31-34. (*Laelaps*.)

1875 E, p. 249. (*Laelaps*.)

Leidy, J. 1865 A, p. 119. (*Celosaurus antiquus*, in part, *vide* Cope.)

Cretaceous; New Jersey.

***Dryptosaurus trihedron* (Cope).**

Cope, E. D. 1877 H, p. 805. (*Laelaps*.)

1877 Q, p. 5. (*Laelaps*.)

1878 M, p. 73. (*Laelaps*.)

1878 R. (Syn.? of *Hypsirophus discurus*.)

Jurassic; Colorado.

DEINODON Leidy. Type *D. horridus* Leidy.

Leidy, J. 1856 F, p. 72.

Cope, E. D. 1866 A, p. 279. (*Dinodon*, restricted.)

1868 C. (*Dinodon*.)

1869 M, pp. 100, 116. (*Aublysodon*; *Dinodon* said to be preoccupied.)

1875 E, p. 248. (*Aublysodon*.)

1876 I, p. 341. (*Aublysodon*.)

Hay, O. P. 1899 G, p. 346.

Leidy, J. 1856 C, p. 119. (*Deinodon*.)

1860 A, p. 143, in part. (*Deinodon*.)

1868 F, p. 198. (*Dinodon*, restricted; *Aublysodon*, type *A. mirandus*.)

Marsh, O. C. 1892 G, p. 174. (*Aublysodon*.)

Zittel, K. A. 1890 A, p. 726. (*Aublysodon*.)

***Deinodon amplus* (Marsh).**

Marsh, O. C. 1892 G, p. 174, pl. ii, fig. 5. (*Aublysodon*.)

Cretaceous (Laramie); Wyoming?

***Deinodon cristatus* (Marsh).**

Marsh, O. C. 1892 G, p. 175, pl. iii, fig. 6. (*Aublysodon*.)

Cretaceous (Laramie); Wyoming?

Deinodon horridus Leidy.*Leidy, J.* 1856 F, p. 72. (In part.)Cope, E. D. 1866 A, p. 279. (*Dinodon horridus*, restricted.)1868 C, p. 416. (*Dinodon*.)1869 M, p. 120. (*Aublysodon*.)1871 C, p. 120. (*Aublysodon*.)1874 C, p. 26. (*Aublysodon*.)1875 E, p. 249. (*Aublysodon*.)1876 I, p. 341. (*Aublysodon*.)1877 G, p. 572. (*Aublysodon*.)

Leidy, J. 1856 C, p. 119. (In part.)

1860 A, p. 143, pl. ix, figs. 36-45; not figs. 21-34; 46-48.

1868 F, p. 198. (*Aublysodon mirandus*).Marsh, O. C. 1892 G, p. 174, pl. iii, fig. 4. (*Aublysodon mirandus*.)

Cretaceous (Laramie); Montana.

The teeth represented on plate ix, of Leidy 1860 A, figs. 21-34, 46-48, are by Cope's restriction of *Deinodon* left without a name. They possibly belong to *Dryptosaurus* and are in this work given the name *Dryptosaurus kenalekides*.

Deinodon lateralis (Cope).Cope, E. D. 1876 H, p. 248. (*Aublysodon*.)1877 G, p. 572. (*Aublysodon*.)

Cretaceous (Laramie); Montana.

ALOSAURUS Marsh. Type *A. fragilis* Marsh.

Marsh, O. C. 1877 G, p. 515.

Bibbins, A. 1895 A, p. 19.

Giebel, C. G. 1879 A, p. 318.

Lydekker, R. 1888 B, p. 159.

Marsh, O. C. 1879 B, p. 90.

1884 B, pls. xi, xii.

1889 B, p. 329.

1896 C, p. 163.

Nicholson and Lydekker 1889 A, p. 1168.

Osborn, H. F. 1899 H, p. 161, fig. 1, C. D.; figs. 4, 5.

1900 G, pp. 779, 785, figs. 2, 4.

Steinmann and Döderlein 1890 A, p. 660.

Williston, S. W. 1878 A, p. 46.

Zittel, K. A. 1890 A, p. 725.

Allosaurus fragilis Marsh.

Marsh, O. C. 1877 G, p. 515.

King, C. 1878 A, p. 346.

Lydekker, R. 1888 B, p. 154, fig. 25.

Marsh, O. C. 1879 B, p. 91, pls. viii, x.

1884 B, pl. xiii.

1896 C, p. 163, pl. x, fig. 2; pl. xi, figs. 1, 2

(*Allosaurus*); pl. xiii, fig. 5 (*Labrosaurus*).

1897 C, p. 505, fig. 61.

1899 A, p. 232, fig. 3.

Zittel, K. A. 1890 A, p. 726, fig. 628. (*A. agilis* *errore*.)

Jurassic; Colorado.

CÆLOSAURUS Leidy. Type *C. antiquus* Leidy.

Leidy, J. 1865 A, p. 119.

Cope, E. D. 1869 M, p. 119.

Zittel, K. A. 1890 A, p. 727.

Cœlosaurus antiquus Leidy.

Leidy, J. 1865 A, p. 119, pl. iii, fig. 3; pl. xvii, figs. 7-11.

Cope, E. D. 1869 B, p. 737.

1869 M, pp. 118, 119.

1875 E, p. 249.

Cretaceous; New Jersey.

CREOSAURUS Marsh. Type *C. atrox* Marsh.

Marsh, O. C. 1878 B, p. 243.

1879 B, p. 90.

1884 B.

1896 C, p. 163.

Nicholson and Lydekker 1889 A, p. 1168.

Williston, S. W. 1878 A, p. 46.

Zittel, K. A. 1890 A, p. 725.

Creosaurus atrox Marsh.

Marsh, O. C. 1878 B, p. 243, figs. 1, 2.

King, C. 1878 A, p. 347.

Marsh, O. C. 1879 B, p. 90, pl. x.

1884 B, pls. ix, xi.

1896 C, p. 163, pl. xii.

Jurassic; Colorado.

ANTRODEMUS Leidy. Type *A. valens* Leidy.

Leidy, J. 1870 E, p. 3.

1873 B, p. 267. (*Poicilopleuron*.)Marsh, O. C. 1879 B, p. 91. (*Labrosaurus*, type *Allosaurus lucaris* Marsh.)1884 B, pl. ix. (*Labrosaurus*.)1896 C, p. 163. (*Labrosaurus*.)

Riggs, E. S. 1900 A, p. 233.

Zittel, K. A. 1890 A, p. 727. (*Labrosaurus*.)

The identification of Marsh's *Labrosaurus* with Leidy's *Antrodemus* and of *L. ferox* with *A. valens* has been made by Mr. F. A. Lucas, of the U. S. National Museum.

Antrodemus lucaris (Marsh).Marsh, O. C. 1878 B, p. 242. (*Allosaurus*.)King, C. 1878 A, p. 346. (*Allosaurus*.)Marsh, O. C. 1879 B, p. 91. (*Labrosaurus*.)

Jurassic; Colorado.

Antrodemus medius (Marsh).Marsh, O. C. 1888 A, p. 93. (*Labrosaurus*.)

Jurassic (Potomac); Maryland.

Antrodemus sulcatus (Marsh).Marsh, O. C. 1896 C, p. 270, pl. xiii, fig. 1. (*Labrosaurus*.)

Formation and locality not given.

Antrodemus valens Leidy.

Leidy, J. 1870 E, p. 3. [Poecilopleuron (*Antrodemus*).]

Leidy, J. 1873 B, pp. 267, 338 (*Poecilopleuron*); pl. xv, figs. 16-18 (*Antrodemus*).

Marsh, O. C. 1884 B, p. 333, pl. ix. (*Labrosaurus ferox*.)

Marsh, O. C. 1896 C, p. 163 (*Allosaurus*); pl. xiii, figs. 2-4 (*Labrosaurus ferox*).

Walcott, C. D. 1900 A, p. 23. (*Labrosaurus ferox*.)

Zittel, K. A. 1890 A, p. 724. (*Megalosaurus*.)
Jurassic; Colorado.

PARONYCHODON Cope. Type *P. lacustris* Cope.

Cope, E. D. 1876 H, p. 256.

1876 I, p. 345.

Osborn, H. F. 1893 B, p. 320. (Syn.? of *Meniscoëssus*.)

The position of this genus is very doubtful.

Paronychodon lacustris Cope.

Cope, E. D. 1876 H, p. 256.

1876 I, p. 350.

1877 G, p. 572.

Cretaceous (Laramie); Montana.

ZAPSALIS Cope. Type *Z. abradens* Cope.

Cope, E. D. 1876 I, p. 344.

A genus of doubtful position.

Zapsalis abradens Cope.

Cope, E. D. 1876 I, p. 345

1877 G, p. 572.

Cretaceous (Laramie); Montana.

PALÆOCTONUS Cope. Type *P. appalachianus* Cope.

Cope, E. D. 1877 E, p. 182.

1893 A, p. 15.

A genus of uncertain position.

Palæoctonus appalachianus Cope.

Cope, E. D. 1877 E, p. 182.

1877 X.

1878 FF.

1893 A, p. 15, pl. ii, figs. 2, 3.

Triassic; Pennsylvania.

Palæoctonus dumblianus Cope.

Cope, E. D. 1893 A, p. 16, pl. ii, figs. 5, 6.

Triassic; Texas.

Palæoctonus orthodon Cope.

Cope, E. D. 1893 A, p. 15, pl. ii, fig. 1.

Triassic; Texas.

SUCHOPRION Cope. Type *S. cyphodon* Cope.

Cope, E. D. 1877 E, p. 185.

A genus of uncertain position.

Suchoprion aulacodus Cope.

Cope, E. D. 1878 E, p. 184. (*Palæoctonus*.)

1878 D, p. 232.

Triassic; Pennsylvania.

Suchoprion cyphodon Cope.

Cope, E. D. 1877 E, p. 185.

1878 FF.

Triassic; Pennsylvania.

Suchoprion sulcidens Cope.

Cope, E. D. 1878 FF. (No description.)

Triassic; Pennsylvania.

TROÖDON Leidy. Type *T. formosus* Leidy.

Leidy, J. 1856 F, p. 72.

Cope, E. D. 1869 M, p. 120.

Leidy, J. 1856 C, p. 119.

1860 A, p. 147.

Zittel, K. A. 1890 A, p. 727.

A genus of doubtful position.

Troödon formosus Leidy.

Leidy, J. 1856 F, p. 72.

Cope, E. D. 1869 M, p. 120.

1874 C, p. 26.

1875 E, p. 248.

1877 G, p. 572.

Leidy, J. 1856 C, p. 119.

1860 A, p. 147, pl. ix, figs. 53-55.

Cretaceous (Laramie); Montana.

ZATOMUS Cope. Type *Z. sarcophagus* Cope.

Cope, E. D. 1871 M, p. 211

1875 V, p. 35.

The position of this genus is doubtful.

Zatomus sarcophagus Cope.

Cope, E. D. 1871 M, p. 211.

1875 V, p. 35.

Emmons, E. 1857 A, p. 62, fig. 34. (No name).

Mesozoic; North Carolina.

ANCHISAURIDÆ.

Marsh, O. C. 1885 A, p. 169.

Gadow, H. 1897 A, p. 204.

Günther, A. C. 1886 A, p. 443.

Lydekker, R. 1888 B, p. 174.

1890 A, p. 246.

Marsh, O. C. 1882 A, p. 84. (Amphisauridæ.)

1884 B, p. 338. (Amphisauridæ.)

1884 G. (Amphisauridæ.)

Marsh, O. C. 1885 D, p. 765.

1895 C, p. 493.

1896 C, pp. 147, 239.

1896 D, p. 206.

Nicholson and Lydekker 1889 A, p. 1186.

Zittel, K. A. 1890 A, p. 730.

ANCHISAURUS Marsh. Type *Megadactylus polyzelus* Hitch.

Marsh, O. C. 1885 A. (To replace *Amphisaurus* Marsh, preoccupied.)

Baur, G. 1883 A, p. 443. (*Amphisaurus*.)

1884 B, p. 447. (*Amphisaurus*.)

Cope, E. D. 1869 M, p. 122 A. (*Megadactylus*.)

1870 S. (*Megadactylus*.)

1877 Q, p. 6. (*Megadactylus*.)

1878 I, p. 236. (*Megadactylus*.)

1885 O, p. 705. (*Megadactylus*.)

1887 C, p. 368. (*Megadactylus*.)

Dames, W. 1884 A. (*Amphisaurus*.)

Marsh, O. C. 1882 A, p. 84. (*Amphisaurus*, to replace *Megadactylus*, preoccupied.)

1889 C, p. 331.

1893 F, p. 151.

1893 G.

1895 C, p. 493.

1896 C, p. 147.

Nicholson and Lydekker 1889 A, pp. 1166, 1170.

Woodward, A. S. 1898 B, p. 198.

Zittel, K. A. 1890 A, p. 730.

Marsh, O. C. 1893 C, p. 169, pl. vi.

1893 F, p. 151, fig. 1.

1895 C, pl. x, fig. 1.

1896 C, p. 148, pl. ii, figs. 1-3; pl. iii, figs. 1, 2.

1896 D, pl. i, fig. 1.

Woodward, A. S. 1898 B, p. 198, fig. 119.

Triassic; Connecticut.

Anchisaurus polyzelus (Hitch.).

Hitchcock, E. 1865 A, p. 39. (*Megadactylus*.)

Cope, E. D. 1869 M, p. 122 E, pl. xiii. (*Megadactylus*.)

1870 A. (*Megadactylus*.)

Hitchcock, E. 1858 A, p. 187. (No name.)

Marsh, O. C. 1892 F, p. 546, pls. xvi, xvii. (*Anchisaurus*.)

1896 C, p. 147, pl. iii, figs. 4, 5. (*Anchisaurus*.)

Triassic; Massachusetts.

Anchisaurus solus Marsh.

Marsh, O. C. 1892 F, p. 545.

1893 C, p. 169.

1893 F, p. 151.

1896 C, p. 149.

Triassic; Connecticut.

Anchisaurus colurus Marsh.

Marsh, O. C. 1891 E, p. 267.

Fürbringer, M. 1900 A, p. 354, fig. 130.

Marsh, O. C. 1892 F, p. 543, pls. xv, xvi.

AMMOSAURUS Marsh. Type *Anchisaurus major* Marsh.

Marsh, O. C. 1891 E, p. 267.

1892 F, p. 545.

1893 G, p. 170.

1895 C, p. 493.

1896 C, p. 150.

Ammosaurus major Marsh.

Marsh, O. C. 1889 C, p. 331. (*Anchisaurus*.)

1891 E, p. 331, fig. 1.

1892 F, p. 546, pls. xvi, xvii.

1896 C, p. 147, pl. iii, figs. 3, 6.

Zittel, K. A. 1890 A, p. 730, fig. 636. (*Anchisaurus*.)

Triassic; Connecticut.

BATHYGNATHUS Leidy. Type *B. borealis* Leidy.

Leidy, J. 1854 H.

Cope, E. D. 1867 D.

1870 S.

Huxley, T. H. 1869 A.

Leidy, J. 1855 A.

1868 F, p. 199.

Marsh, O. C. 1882 A, p. 84.

1892 C, p. 240.

1895 C, p. 493.

Meyer, H. 1855 A, p. 161.

Nicholson and Lydekker 1889 A, p. 1166.

Owen, R. 1860 A, p. 163.

Zittel, K. A. 1890 A, p. 731.

Bathygnathus borealis Leidy.

Leidy, J. 1854 H, pl. xxxiii.

Cope, E. D. 1869 M, p. 119.

Dana, J. D. 1896 A, p. 754, fig. 1180.

Dawson, J. W. 1868 A, p. 119, fig. 29.

1878 A, p. 119, fig. 29.

Lea, I. 1856 B, p. 123.

1858 A.

Leidy, J. 1855 A.

1881 A.

Lesley, J. P. 1889 A, p. 80, figures.

Owen, R. 1860 E, p. 252.

1876 B, p. 359, fig. 9.

Triassic; Prince Edwards Island.

CLEPSYSAURUS Lea. Type *C. pennsylvanicus* Lea.*Lea*, I. 1851 B.Cope, E. D. 1869 M, p. 122 A
1870 I, p. 444.

1870 S.

1871 M, p. 210.

Emmons, E. 1856 A, p. 298. (*Clepsisaurus*.)

Lea, I. 1853 A, p. 198.

Leidy, J. 1857 B, p. 150.

Marsh, O. C. 1895 C, p. 493.

Nicholson and Lydekker 1889 A, p. 1166.

Zittel, K. A. 1890 A, p. 731.

Clepsysaurus pennsylvanicus* Lea.Lea*, I. 1851 B.

Amer. Jour. Science 1852 B.

Cope, E. D. 1866 D, p. 249.

1869 B, p. 733.

1869 M, p. 122 A.

1871 M, p. 210.

1875 V, p. 35, pl. viii, fig. 4.

Dana, J. D. 1896 A, p. 754, fig. 1181.

Emmons, E. 1856 A, p. 299, figs. A, B, and 21.

1857 A, p. 67, in part. (*Clepsisaurus*.)1860 A, p. 175, figs. 158¹⁻⁸, 160². (*Clepsisaurus*.)

Lea, I. 1851 A. (No generic name.)

1853 A, p. 199, pls. xvii-xix.

1856 B.

1858 A.

Leidy, J. 1854 H, p. 327.

1855 A.

Lesley, J. P. 1889 A, p. 133, figure.

Meyer, H. 1855 A, p. 161.

Wheatley, C. M. 1861 A, p. 44.

Triassic; Pennsylvania, New Jersey, North Carolina.

***Clepsysaurus veatleianus* Cope.**

Cope, E. D. 1877 E, p. 184.

1878 F F. (*C. wheatleianus*.)

Lesley, J. P. 1889 A, p. 134.

Triassic; Pennsylvania.

THECODONTOSAURUS Riley and Stutchbury.

Riley and Stutchbury 1838 A, p. 352.Cope, E. D. 1877 E, p. 182. (*Palæosaurus*.)Huxley, T. H. 1870 D, p. 43. (*Thecodontosaurus*, *Palæosaurus*.)

Lydekker, R. 1888 B, p. 174.

1890 A, p. 246.

Marsh, O. C. 1895 C, p. 493.

Owen, R. 1842 A, p. 154. (*Thecodontosaurus*, *Palæosaurus*.)

1845 B, p. 266.

Riley and Stutchbury 1838 A, p. 352. (*Palæosaurus*, with species *cylindrodon* and *platyodon*.)Seeley, H. G. 1895 C. (*Thecodontosaurus*, *Palæosaurus*.)Zittel, K. A. 1890 A, p. 721 (*Thecodontosaurus*); p. 722 (*Palæosaurus*).

Thecodontosaurus and *Palæosaurus* of Riley and Stutchbury are here united. In case *Palæosaurus* of these authors is distinct, as seems probable, it must be provided with a new name, since *Palæosaurus* was used by Geoffroy in 1831 in another sense.

***Thecodontosaurus fraserianus* Cope.**Cope, E. D. 1878 D, p. 232. (*Palæosaurus*.)

1878 FF.

Triassic; Pennsylvania.

***Thecodontosaurus gibbideus* Cope.**

Cope, E. D. 1878 D, p. 231.

1878 FF.

Triassic; Pennsylvania.

ARCTOSAURUS Adams. Type *A. osborni* Adams.*Adams, A. L.* 1875 A, p. 177.

1877 A.

Lydekker, R. 1890 A, p. 250.

Marsh, O. C. 1895 C, p. 493.

1896 C, p. 152.

Nicholson and Lydekker 1889 A, p. 1166.

Zittel, K. A. 1890 A, p. 731.

The position of this genus is doubtful.

Arctosaurus osborni* Adams.Adams, A. L.* 1875 A, p. 177, figs. A-D.

1877 A.

Lydekker, R. 1889 L, p. 352, figs. A-D.

1890 A, p. 251, fig. 59, A-D.

Mesozoic; Bathurst Island.

CŒLURIDÆ.

Marsh, O. C. 1881 B. (*Cœluria*, *Cœluridæ*.)

Cope, E. D. 1889 R, p. 864.

Lydekker, R. 1888 B, p. 155.

1890 A, p. 243.

Marsh, O. C. 1881 E, p. 423. (*Cœluria*, *Cœluridæ*.)1882 A, p. 85. (*Cœluria*, *Cœluridæ*.)1884 B, p. 338. (*Cœluria*, *Cœluridæ*.)1884 G. (*Cœluria*, *Cœluridæ*.)Marsh, O. C. 1885 D, p. 765. (*Cœluria*, *Cœluridæ*.)1895 C, p. 494. (*Cœluria*, *Cœluridæ*.)1896 C, p. 240. (*Cœluria*, *Cœluridæ*.)

1896 D, p. 206.

Menzies, M. 1887 A. (*Cœluria*.)

Nicholson and Lydekker 1889 A, p. 1170.

Steinmann and Döderlein 1890 A, p. 661

Zittel, K. A. 1890 A, p. 731.

CÆLURUS Marsh. Type *C. fragilis* Marsh.*Marsh, O. C.* 1879 H, p. 504.

Cope, E. D. 1887 A, p. 221.

1887 C.

Lydekker, R. 1888 B, p. 155.

1889 H.

Marsh, O. C. 1881 B.

1884 B.

1896 C, p. 155.

Nicholson and Lydekker 1889 A. p. 1170.

Seeley, H. G. 1887 A.

1888 C, p. 83.

Vetter, B. 1885 A. p. 119.

Zittel, K. A. 1890 A, p. 731.

Cœlurus agilis Marsh.*Marsh, O. C.* 1884 B, p. 335, pl. x, figs. 3a, 3b.

1896 C, pl. x, figs. 3, 4.

Jurassic; Colorado.

Cœlurus fragilis Marsh.*Marsh, O. C.* 1879 H, p. 504.Cope, E. D. 1881 BB, p. 413. (*Amphicœlias fragillissimus* a synonym?)

1887 C, p. 369.

Marsh, O. C. 1881 B, pl. x.

1884 B, p. 340, pls. xi, xiii.

1896 C, p. 155, pl. vii.

Seeley, H. G. 1888 C, p. 5.

Zittel, K. A. 1890 A, p. 731, figs. 637-640.

Jurassic; Wyoming.

Cœlurus gracilis Marsh.*Marsh, O. C.* 1888 A, p. 94.

Zittel, K. A. 1890 A, p. 732.

Jurassic (Potomac); Maryland.

CÆLOPHYSIS Cope. Type not indicated.

Cope, E. D. 1889 N.Lydekker, R. 1888 B, p. 155. (*Tanystropheus*.)**Cœlophysis bauri** Cope.*Cope, E. D.* 1887 C, p. 368. (*Cœlurus*.)1887 A, p. 226. (*Tanystropheus*.)

1889 N.

Zittel, K. A. 1890 A, p. 733. (*Tanystropheus*.)

Triassic; New Mexico.

Cœlophysis longicollis Cope.*Cope, E. D.* 1887 C, p. 368. (*Cœlurus*.)*Cope, E. D.* 1887 A, p. 221. (*Tanystropheus*.)

1889 N.

Zittel, K. A. 1890 A, p. 733. (*Tanystropheus*.)

Triassic; New Mexico.

Cœlophysis willistoni Cope.*Cope, E. D.* 1887 A, p. 227. (*Tanystropheus*.)

1889 N.

Zittel, K. A. 1890 A, p. 733. (*Tanystropheus*.)

Triassic; New Mexico.

TICHOSTEUS Cope. Type *T. lucasanus* Cope.*Cope, E. D.* 1877 F, p. 194.

1878 M, p. 84.

Zittel, K. A. 1890 A, p. 732.

A genus of uncertain position.

Tichosteus æquifacies Cope.*Cope, E. D.* 1878 H, p. 392.

Jurassic; Colorado.

Tichosteus lucasanus Cope.*Cope, E. D.* 1877 F, p. 194.

1880 Q.

Osborn, H. F. 1898 J, p. 227.

Jurassic; Colorado.

CERATOSAURIDÆ.

Marsh, O. C. 1884 B, p. 330.

1884 E.

1884 G. (*Ceratosauria*, *Ceratosauridæ*.)1885 D. (*Ceratosauria*, *Ceratosauridæ*.)

1892 H.

1895 C, p. 494. (*Ceratosauria*, *Ceratosauridæ*.)1896 C, p. 240. (*Ceratosauria*, *Ceratosauridæ*.)Marsh, O. C. 1896 D, p. 207. (*Ceratosauria*, *Ceratosauridæ*.)Lydekker, R. 1888 B, p. 157. (*Megalosauridæ*, in part.)

Steinmann and Döderlein 1890 A, p. 660.

Zittel, K. A. 1890 A, p. 727.

CERATOSAURUS Marsh. Type *C. nasicornis* Marsh.*Marsh, O. C.* 1884 B.

Baur, G. 1884 B, p. 448.

1890 C, p. 301.

1891 D, p. 446.

Cope, E. D. 1892 K, p. 244. (*Megalosaurus*.)

Dollo, L. 1884 B.

Fürbringer, M. 1888 A, p. 1609.

Gaudry, A. 1890 C, p. 252.

Lydekker, R. 1888 A, p. 53.

1888 B, p. 157.

1889 C, p. 45.

1893 B, p. 302. (*Megalosaurus*.)1893 E, p. 138. (*Megalosaurus*?)

Marsh, O. C. 1884 E.

1889 B, p. 330.

1892 H, p. 347, pl. vii.

Marsh, O. C. 1893 F, p. 152.

1893 I, p. 437.

1895 C, p. 494.

1896 C, p. 156.

1896 D, p. 203.

1897 C, p. 503.

Natural Science 1893 A, p. 138.

Nicholson and Lydekker 1889 A, p. 1168.

Secley, H. G. 1887 A, p. 225.

Steinmann and Döderlein 1890 A, p. 660.

Vetter, B. 1885 A, p. 111.

Woodward, A. S. 1898 B, p. 199.

Zittel, K. A. 1890 A, p. 727.

Ceratosaurus nasicornis Marsh.

Marsh, O. C. 1884 B, p. 330, pls. viii-xi.

Cope, E. D. 1892 K, P. 245. (Megalosaurus.)
1892 Z, p. 18.

Marsh, O. C. 1884 E, fig. 1.

1892 H, p. 347, pl. vii.

1893 F, p. 152, pl. vi.

1895 C, p. 489, pl. x, fig. 5; text figs. 9, 10.

1896 C, p. 156, pls. viii-x, fig. 1.; pl. xiv, text
figs. 1, 64, 65.

1896 D, p. 202, pl. i, fig. 5; text figs. 9, 10.

1897 C, p. 503, pl. xxv, text fig. 60.

Menzbier, M. 1887 A, p. 533.

Walcott, C. D. 1900 A, p. 23.

Woodward, A. S. 1898 B, p. 200, fig. 120.

Zittel, K. A. 1890 A, p. 727, figs. 629-635.

Jurassic; Colorado.

ORNITHOMIMIDÆ.

Marsh, O. C. 1890 A, p. 85.

1890 C, p. 425.

1895 C, p. 494.

Marsh, O. C. 1896 C, pp. 203, 240.

1896 D, p. 207.

Zittel, K. A. 1896 D, p. 207.

ORNITHOMIMUS Marsh. Type *O. velox* Marsh.

Marsh, O. C. 1890 A, p. 84.

Baur, G. 1890 C, p. 303.

Gadow, H. 1897 A, p. 205.

Marsh, O. C. 1895 C, p. 494.

1896 C, p. 204.

1897 C, p. 518.

Zittel, K. A. 1890 A, p. 767.

Ornithomimus grandis Marsh.

Marsh, O. C. 1890 A, p. 85.

1892 E, p. 452.

1896 C, p. 206.

Zittel, K. A. 1890 A, p. 767.

Cretaceous (Laramie); Colorado.

Ornithomimus minutus Marsh.

Marsh, O. C. 1892 E, p. 452.

1896 C, p. 206.

Cretaceous (Laramie); Colorado.

Ornithomimus sedens Marsh.

Marsh, O. C. 1892 E, p. 451.

1896 C, p. 205, figs. 49-52.

Cretaceous (Laramie); Colorado.

Ornithomimus tenuis Marsh.

Marsh, O. C. 1890 A, p. 85.

Cretaceous (Laramie); Colorado.

Ornithomimus velox Marsh.

Marsh, O. C. 1890 A, p. 84, pl. i, figs. 1-3.

Cannon, J. L. 1890 A.

Dana, J. D. 1896 A, p. 847, fig. 1416.

Marsh, O. C. 1896 C, p. 205, pl. lviii, figs. 1-4.

1897 C, pp. 518, 527, figs. 83-86.

Zittel, K. A. 1890 A, p. 766, figs. 677, 678.

Cretaceous (Laramie); Colorado.

HALLOPIDÆ.

Marsh, O. C. 1881 E, p. 423. (Hallopoda, Hallopod-
idæ.)

Cope, E. D. 1883 J, p. 98. (Hallopoda.)

Günther, A. 1886 A, p. 443.

Marsh, O. C. 1882 A, p. 85. (Hallopoda, Hallopod-
idæ.)

1884 B, p. 338.

1885 D.

Marsh, O. C. 1890 B.

1895 C, p. 494. (Hallopoda, Hallopodæ.)

1896 C, p. 240. (Hallopoda, Hallopodæ.)

1896 D, p. 207. (Hallopoda, Hallopodæ.)

Nicholson and Lydekker 1889 A, p. 1169.

Zittel, K. A. 1890 A, p. 693 (Hallopoda); p. 736
(Hallopodæ).

HALLOPUS Marsh. Type *Nanosaurus victor* Marsh.

Marsh, O. C. 1881 E, p. 422.

Baur, G. 1890 E.

Marsh, O. C. 1884 B, p. 338.

1895 C, pp. 488, 494.

1896 C, p. 153.

1896 D, p. 201.

Nicholson and Lydekker 1889 A, p. 1169.

Vetter, B. 1885 A, p. 119.

Zittel, K. A. 1890 A, p. 736.

Hallopus victor Marsh.

Marsh, O. C. 1877 D, p. 255. (Nanosaurus.)

Marsh, O. C. 1881 E, p. 422.

1890 B, p. 417, figure.

1891 F, p. 337.

1895 C, p. 484, text figs. 4, 5.

1896 C, p. 153, pl. vi, text figs. 3, 59, 60.

1896 D, p. 199, figs. 4, 5.

1897 C, p. 482, figs. 25, 26.

Woodward, A. S. 1898 B, p. 200.

Zittel, K. A. 1890 A, p. 736, fig. 643.

Jurassic; Colorado.

Suborder ORTHOPODA Cope.

- Sore, E. D.* 1866 E, p. 317.
Baur, G. 1887 A, p. 487. (Orthopoda.)
 1887 C, p. 101. (Orthopoda.)
 1890 B. (Orthopoda.)
 1891 A. (Iguanodontia.)
 1891 B. (Orthopoda.)
 1891 C, p. 354. (Iguanodontia.)
 1891 D, p. 451. (Iguanodontia.)
Cope, E. D. 1869 M, p. 90. (Orthopoda.)
 1871 B, p. 234. (Orthopoda.)
 1882 Q. (Orthopoda.)
 1883 J, p. 98. (Orthopoda.)
 1889 R, p. 864. (Orthopoda.)
 1891 N, p. 43. (Orthopoda.)
 1898 B, p. 68. (Orthopoda.)
Dollo, L. 1888 B. (Iguanodontia.)
Fürbringer, M. 1888 A.
Fürbringer, M. 1900 A.
Gadow, H. 1897 A, p. 204.
 1898 A, p. 22.
Lydekker, R. 1888 B, p. 175. (Ornithopoda.)
Marsh, O. C. 1894 E, p. 90. (Preidentata.)
 1895 C, p. 496. (Preidentata.)
 1896 C, pp. 186, 242. (Preidentata.)
 1896 D, p. 209. (Preidentata.)
Nicholson and Lydekker 1889 A, p. 1152. (Ornithopoda.)
Osborn, H. F. 1900 G, p. 786. (Iguanodontia.)
Seeley, H. G. 1888 B. (Ornithischia.)
 1888 G. (Ornithischia.)
Steinmann and Döderlein 1890 A, p. 663. (Orthopoda.)
Zittel, K. A. 1890 A, pp. 692, 736. (Orthopoda.)

Superfamily STEGOSAUROIDEA nom. nov.

- This group is called by the following writers
 the *Stegosauria*.
Baur, G. 1883 A, p. 435.
 1884 A.
Cope, E. D. 1880 R.
 1883 J, p. 98.
Dollo, L. 1892 C, p. 11. ("Stegosauriens.")
Fürbringer, M. 1888 A.
 1900 A, p. 348.
Gadow, H. 1897 A, p. 205. (Stegosauri.)
 1898 A, p. 22. (Stegosauri.)
Haeckel, E. 1895 A, p. 387. (Pachypoda.)
Krause, W. 1881 A.
Lydekker, R. 1888 B, p. 175.
 1889 C, p. 43.
Marsh, O. C. 1877 F, p. 513.
 1878 G, p. 224.
 1880 C.
 1881 A.
Marsh, O. C. 1882 A, p. 83.
 1881 E, p. 423.
 1884 G.
 1885 D.
 1887 C.
 1888 D.
 1889 B, p. 326.
 1891 D, p. 181.
 1891 J, p. 387.
 1895 C, p. 496.
 1896 C, pp. 193, 242.
 1896 D, p. 209.
 1897 C, p. 498.
Science 1885 B.
Steinmann and Döderlein 1890 A, p. 663.
Vetter, B. 1885 A, p. 117.
Wiedersheim, R. 1881 A.
Zittel, K. A. 1890 A, pp. 693, 740.

STEGOSAURIDÆ.

- Marsh, O. C.* 1880 C, p. 259.
Cope, E. D. 1898 B, p. 70. (Hypsirhophidæ.)
Lydekker, R. 1888 B, p. 176. (Omosauridæ.)
 1889 L.
 1890 A, p. 251.
Marsh, O. C. 1881 E, p. 423.
 1882 A, p. 83.
 1884 B, p. 336.
Marsh, O. C. 1884 G.
 1885 D, p. 764.
 1895 C, p. 496.
 1896 C, p. 242.
 1896 D, p. 209.
Nicholson and Lydekker 1889 A, p. 1161.
Steinmann and Döderlein 1890 A, p. 664.
Zittel, K. A. 1890 A, p. 744.

STEGOSAURUS Marsh. Type *S. armatus* Marsh.

- Marsh, O. C.* 1877 F, p. 513.
Cope, E. D. 1878 H, p. 389. (Hypsirophus.)
 1878 R. (Hypsirophus, type *H. discurus*.)
 1888 Z. (Hypsirophus.)
 1892 Z, p. 18. (Hypsirophus.)
Koken, E. 1897 A, p. 51.
Krause, W. 1881 A.
Lydekker, R. 1888 B, p. 177. (Omosaurus, Stegosaurus.)
 1889 F, p. xi.
Lydekker, R. 1890 A, p. 253.
 1893 B, p. 302. (Hypsirophus.)
Marsh, O. C. 1880 C, p. 253.
 1881 A.
 1883 A, p. 85.
 1887 C.
 1888 D.
 1889 B, p. 327.
 1891 D.
 1891 J.

Marsh, O. C. 1892 G, p. 374.

1893 I, p. 438. (*Stegosaurus*, *Hypsirophus*.)

1895 C, p. 497.

1896 C, pp. 186, 242.

1897 C, p. 498.

Nicholson and Lydekker 1889 A, p. 1161.

Owen, R. 1875 C, p. 45. (*Omosaurus*.)

Steinmann and Döderlein 1890 A, p. 664.

Woodward, A. S. 1898 B, p. 210.

Zittel, K. A. 1890 A, p. 726 (*Hypsirophus*); p. 744. (*Stegosaurus*).

***Stegosaurus affinis* Marsh.**

Marsh, O. C. 1881 A, p. 169.

1896 C, p. 191.

Jurassic; Wyoming?

***Stegosaurus armatus* Marsh.**

Marsh, O. C. 1877 F, p. 513.

King, C. 1878 A, p. 346.

Lydekker, R. 1888 B, p. 179, fig. 32.

Marsh, O. C. 1879 H, p. 504.

1880 C, p. 253 (part), pl. vi (except figs. 4, 5, which belong to *Diplodocus*).

1891 D, p. 179.

1896 C, p. 188.

Jurassic; Colorado.

***Stegosaurus discurus* (Cope).**

Cope, E. D. 1878 R. (*Hypsirophus*.)

1878 H, p. 389. (*Hypsirophus*.)

Jurassic; Colorado.

***Stegosaurus duplex* Marsh.**

Marsh, O. C. 1887 C, p. 416.

1881 A, p. 168 (pelvis), pl. vi, fig. 1. (*S. un-*
gulatus.)

1888 D, p. 14.

1891 D, p. 179.

1896 C, p. 193.

Jurassic; Wyoming.

***Stegosaurus seeleyanus* (Cope).**

Cope, E. D. 1879 R. (*Hypsirophus*.)

Jurassic; Colorado.

***Stegosaurus stenops* Marsh.**

Marsh, O. C. 1887 C, p. 114, pl. vi.

Cope, E. D. 1892 Z, p. 18. (*Hypsirophus*.)

Lydekker, R. 1888 B, p. 176, fig. 31.

Marsh, O. C. 1888 D, pl. i.

1890 C, p. 426, pl. vii, fig. 2.

1891 D, p. 179.

1896 C, p. 186, pl. xliii, pl. xlvii, fig. 3.

1897 C, p. 499, fig. 52.

Woodward, A. S. 1898 B, p. 212, fig. 131.

Zittel, K. A. 1890 A, p. 745, figs. 650, 654.

Jurassic; Colorado.

***Stegosaurus sulcatus* Marsh.**

Marsh, O. C. 1887 C, p. 415, pl. viii, figs. 4-6.

1888 D, pl. ii, figs. 4-6.

1896 C, p. 193, pl. i, figs. 4-6.

Jurassic; Colorado?

***Stegosaurus unguatus* Marsh.**

Marsh, O. C. 1879 H, p. 504.

Cope, E. D. 1880 R.

1881 BB, pp. 254, 340. (*Hypsirophus*.)

Fürbringer, M. 1900 A, p. 351, figs. 121, 126.

Geinitz and Deichmüller 1882 A, p. 15.

Hutchison, H. N. 1893 A, p. 110, pl. xi.

Lydekker, R. 1893 B, p. 304, fig. 3. (*Hypsirophus*.)

Marsh, O. C. 1881 A (part), pls. vi-viii (except
fig. 1, pl. vi, which belongs to *S. duplex*).

1887 C, p. 415, pls. vii, viii.

1888 D, pl. ii, figs. 1-3.

1891 D, pl. ix.

1891 J, pl. xi.

1892 G, p. 176, pl. iv.

1894 E, pl. vii, fig. 6.

1896 C, p. 188, pl. xlv, figs. 1, 3, 4; pls. xlv-
xlvii; pl. xlviii, figs. 1, 2; pl. xlix; pl. i,
figs. 1-3; pl. lii.

1896 D, pl. i, fig. 8.

1897 C, p. 498, pl. xxii, text figs. 54-57.

Woodward, A. S. 1898 B, p. 211, fig. 130.

Zittel, K. A. 1890 A, p. 745, figs. 651-653, 655-660.

Jurassic; Wyoming.

DIRACODON Marsh. Type *D. laticeps* Marsh.

Marsh, O. C. 1881 E, p. 421.

1887 C, p. 416.

1888 D, p. 14.

1891 D, p. 181.

1895 C, p. 497.

1896 C, p. 193.

Nicholson and Lydekker 1889 A, p. 1163.

Zittel, K. A. 1890 A, p. 748.

***Diracondon laticeps* Marsh.**

Marsh, O. C. 1881 E, p. 421.

1887 C, p. 416, pl. ix.

1888 D, pl. iii.

1896 C, p. 193, pl. li.

Jurassic; Wyoming.

PRICONODON Marsh. Type *P. crassus* Marsh.

Marsh, O. C. 1888 A, p. 93.

1896 C, p. 187.

Zittel, K. A. 1890 A, p. 748.

***Priconodon crassus* Marsh.**

Marsh, O. C. 1888 A, p. 93, figs. 3-9.

1896 C, pl. xlv, fig. 2.

Walcott, C. D. 1900 A, p. 23.

PALÆOSCINCUS Leidy. Type *P. costatus* Marsh.*Leidy, J.* 1856 F, p. 72.

Cope, E. D. 1869 M, p. 99.

Leidy, J. 1856 C, p. 118.

Marsh, O. C. 1889 B, p. 328.

1892 G, p. 173.

1895 C, p. 497.

1896 C, p. 225.

Zittel, K. A. 1890 A, p. 748.

The affinities of this genus are uncertain.

Palæoscincus costatus Leidy.*Leidy, J.* 1856 F, p. 72.

Cope, E. D. 1869 M, p. 99.

Cope, E. D. 1874 C, p. 26.

1875 E, p. 248.

1877 G, p. 572.

Leidy, J. 1856 C, p. 118.

1860 A, p. 146, pl. ix, figs. 49-61; pl. xi, fig. 8.

Marsh, O. C. 1896 C, p. 225.

Cretaceous (Laramie); Montana.

Palæoscincus latus Marsh.*Marsh, O. C.* 1892 G, p. 173, pl. iii, fig. 3.

1896 C p. 225, pl. lxxv. 75

Cretaceous (Laramie); Wyoming.

DYSTROPHÆUS Cope. Type *D. viæmalæ* Cope.*Cope, E. D.* 1877 B, p. 579.

1877 K, p. 31.

Marsh, O. C. 1895 C, p. 497.

Zittel, K. A. 1890 A, p. 749.

A genus of uncertain relationships.

Dystrophæus viæmalæ Cope.*Cope, E. D.* 1877 B, p. 581.

1877 K, p. 34, text fig. 3.

1878 M, p. 84.

Marsh, O. C. 1896 C, p. 152.

Triassic?; Utah.

HYPsIBEMA Cope. Type *H. crassicauda* Cope.*Cope, E. D.* 1869 I.

1869 M, p. 122G.

1871 M, p. 211.

1875 V, p. 36.

Zittel, K. A. 1890 A, p. 748.

A genus of uncertain position.

Hypsibema crassicauda Cope.*Cope, E. D.* 1869 I.

1869 M, p. 122 G, pl. i, figs. 14, 15.

1871 M, p. 211.

1875 E, p. 247.

1875 V, p. 36, pls. vi, vii.

Nopcea, F. B. 1899 A, p. 557.

Cretaceous; New Jersey.

NODOSAURIDÆ.

Marsh, O. C. 1890 C, p. 425.

1895 C, p. 497.

Marsh, O. C. 1896 C, p. 243.

1896 D, p. 210.

NODOSAURUS Marsh. Type *N. textilis* Marsh.*Marsh, O. C.* 1889 E, p. 175.

1895 C, p. 497.

1896 C, p. 225.

Nicholson and Lydekker 1889 A, p. 1164.

Zittel, K. A. 1890 A, p. 754.

Nodosaurus textilis Marsh.*Marsh, O. C.* 1889 E, p. 175, figure.

Lambe, L. M. 1899 A, p. 70. (Identification doubtful.)

Marsh, O. C. 1896 C, p. 225, pl. lxxv, fig. 5.

Cretaceous; Wyoming, British America.

Superfamily CERATOPSOIDEA nom. nov.

Dollo, L. 1892 C, p. 12. ("Ceratopsiens.")

Fürbringer, M. 1900 A, p. 348. (Ceratopsia.)

Gadow, H. 1897 A, p. 205. (Ceratopsia.)

1898 A. p. 23. (Ceratopsia.)

Marsh, O. C. 1890 C, p. 418. (Ceratopsia.)

Marsh, O. C. 1895 C, p. 497. (Ceratopsia.)

1896 C, p. 243. (Ceratopsia.)

1896 D, p. 210. (Ceratopsia.)

Zittel, K. A. 1890 A, p. 749. (Ceratopsia.)

CERATOPSIDÆ.

- Marsh, O. C. 1888 C, p. 473.
 Baur, G. 1891 A. (Agathaumidæ.)
 1891 C, p. 354. (Agathaumidæ.)
 Cannon, G. L. 1888 A, p. 215.
 Cope, E. D. 1889 Q, p. 715. (Agathaumidæ.)
 1889 K, p. 864. (Agathaumidæ.)
 1891 N, p. 43. (Agathaumidæ.)
 1898 B, p. 70. (Agathaumidæ.)
 Marsh, O. C. 1889 G.
 1890 A, p. 83.
 1890 C, p. 418.

- Marsh, O. C. 1890 F.
 1891 B.
 1891 C.
 1891 G.
 1892 A.
 1895 C, p. 497.
 1896 C, pp. 206, 243.
 1896 D, p. 210.
 1897 C, p. 509.
 Nicholson and Lydekker 1889 A, p. 1163.
 Steinmann and Döderlein 1890 A, p. 665.

AGATHAUMAS Cope. Type *A. sylvestris* Cope.

- Cope, E. D. 1872 Q.
 Amer. Geologist 1891 D.
 Baur, G. 1891 A.
 1891 C, p. 354.
 1891 D, p. 450.
 Cope, E. D. 1874 B, p. 444 (Agathaumas); pp. 448, 451 (Polyonax, type *P. mortuarius*).
 1874 C, p. 17 (Agathaumas); p. 24 (Polyonax).
 1875 E, p. 53 (Agathaumas); p. 63 (Polyonax).
 1883 J, p. 99.
 1888 Z. (Polyonax.)
 1889 A. (Polyonax.)
 1889 Q, p. 715. (Polyonax.)
 1889 T, p. 906. (Polyonax.)
 1891 N, p. 43.
 1892 T, p. 758.
 Marsh, O. C. 1893 I, p. 438.
 1895 C, p. 497.
 1896 C, p. 217. (Agathaumas; Polyonax.)
 Osborn, H. F. 1893 B, p. 326.
 Zittel, K. A. 1890 A, p. 751. (Agathaumas, Polyonax.)

Agathaumas mortuarius Cope.

- Cope, E. D. 1874 B, pp. 448, 451. (Polyonax.)
 1874 C, p. 25. (Polyonax.)
 1875 E, p. 64, pl. ii, figs. 3-5; pl. iii, figs. 1-4. (Polyonax.)
 1889 Q, p. 715.
 Cretaceous (Laramie); Colorado.

Agathaumas sylvestris Cope.

- Cope, E. D. 1872 Q.
 Baur, G. 1891 A.
 Cope, E. D. 1872 EE, p. 279.
 1872 FF.
 1873 A.
 1874 B, pp. 442, 445.
 1874 C, pp. 16, 18.
 1875 E, pp. 54, 248, pls. iv, v; pl. vi, figs. 1-4.
 1878 S, p. 245.
 1889 Q, p. 715.
 1891 N, p. 43.
 1892 T, p. 758.
 Cretaceous (Laramie); Wyoming.

TRICERATOPS Marsh. Type *Ceratops horridus* Marsh.

- Marsh, O. C. 1889 E, p. 173.
 Ameghino, F. 1896 A, p. 391.
 Amer. Geologist 1891 D.
 Baur, G. 1891 A. (Agathaumus.)
 1891 D, p. 450. (Agathaumus.)
 Cope, E. D. 1889 I, p. 906. (Polyonax.)
 Fürbringer, M. 1900 A, p. 350.
 Lydekker, R. 1893 E, p. 138.
 Marsh, O. C. 1889 G, p. 502.
 1890 C, p. 418.
 1890 F, p. 2.
 1891 B, p. 167.
 1891 C, p. 339.
 1893 B.
 1895 C, p. 497.
 1896 C, p. 208.
 1897 C, p. 510.
 1898 B, p. 407.
 Natural Science 1893 A.
 Nicholson and Lydekker 1889 A, p. 1163.
 Seeley, H. G. 1893 A, p. 438.
 Steinmann and Döderlein 1890 A, p. 665.
 Woodward, A. S. 1898 B, p. 213.
 Zittel, K. A. 1890 A, pp. 750, 752. (Syn. ? of Monoclonius.)

Triceratops calicornis Marsh.

- Marsh, O. C. 1898 A, p. 92.
 Walcott, C. D. 1900 A, p. 23. (T. californis.)
 Cretaceous; Wyoming.

Triceratops elatus Marsh.

- Marsh, O. C. 1891 E, p. 265.
 Cretaceous (Laramie); Wyoming.

Triceratops galeus Marsh.

- Marsh, O. C. 1889 E, p. 174.
 1897 C, p. 527.
 Cretaceous (Laramie); Colorado.

Triceratops horridus Marsh.

- Marsh, O. C. 1889 C, p. 334. (Ceratops.)
 1889 E, p. 173.
 1889 G, p. 502.
 1890 C, p. 426, pl. vi, figs. 7-9.
 1891 B, p. 178, pl. ix.
 1891 G.
 1896 C, p. 208, pl. lxix, figs. 10-12.
 1897 C, p. 527.
 Zittel, K. A. 1890 A, p. 752, fig. 665.
 Cretaceous (Laramie); Wyoming, Colorado.

Triceratops obtusus Marsh.*Marsh, O. C.* 1898 A, p. 92.

Walcott, C. D. 1900 A, p. 23,

Cretaceous (Laramie); Wyoming.

Triceratops prorsus Marsh.*Marsh, O. C.* 1890 A.

Dana, J. D. 1896 A, p. 846, figs. 1411-1413.

Fürbringer, M. 1900 A, p. 351, figs. 123, 125, 128.

Hutchison, H. N. 1893 A, p. 116, pl. xi, text fig. 30.

Lydekker, R. 1893 B, p. 304, fig. 4. (Agathau-

mus.)
Marsh, O. C. 1890 C, p. 425, pl. v, figs. 3-5; pl. vi,
figs. 5, 6.

1891 B, p. 177, pls. i-ix.

1891 C, p. 339, pl. xv.

1892 A, p. 84, pl. iii, fig. 6.

1894 E, pl. vii, fig. 4.

1895 C, pl. x, fig. 10.

1896 C, p. 208, pl. lix; pl. lx, fig. 4; pl. lxi,
figs. 1-8; pl. lxiv; pl. lxviii; pl. lxix, figs.

1-3, 7-9; pls. lxxv, lxxvi; pl. lxxvii, figs. 2-4.

1896 D, pl. i, fig. 11.

1897 C, p. 511, pl. xxvii; text figs. 75, 76.

Woodward, A. S. 1898 B, p. 213, fig. 132.

Cretaceous (Laramie); Wyoming.

Triceratops serratus Marsh.*Marsh, O. C.* 1890 A, p. 81.

Dana, J. D. 1896 A, p. 846, fig. 1414.

Marsh, O. C. 1890 C, p. 425, pl. v, fig. 2; pl. vi, figs.
1-6.

1891 B, p. 177, pls. i, ii.

1892 A, p. 84, pl. iii.

1896 C, p. 208, pl. lx, fig. 3; pl. lxi, figs. 7,
9, 10.

1897 C, p. 512, fig. 78.

Woodward, A. S. 1898 B, p. 214, fig. 133.

Zittel, K. A. 1890 A, p. 752, figs. 661, 664.

Cretaceous (Laramie); Wyoming.

Triceratops sulcatus Marsh.*Marsh, O. C.* 1890 C, p. 422.

Walcott, C. D. 1900 A, p. 23.

Cretaceous (Laramie); Wyoming.

Triceratops sp. indet.

Lambe, L. M. 1899 A, p. 70.

Cretaceous; British America.

STERRHOLOPHUS Marsh. Type *Triceratops flabellatus* Marsh.*Marsh, O. C.* 1891 C, p. 340.

1895 C, p. 497.

1896 C, p. 216.

Woodward, A. S. 1898 B, p. 216.

Sterrhophilus flabellatus Marsh.*Marsh, O. C.* 1889 E, p. 174. (Triceratops.)

1889 G, p. 506, pl. xii. (Triceratops.)

1890 C, p. 425, pl. v, fig. 1; pl. vii, fig. 1.

(Triceratops.)

Marsh, O. C. 1890 F, pl. i. (Triceratops.)

1891 B, p. 177, pls. i, vii, ix. (Triceratops.)

1891 C, p. 340.

1892 A, p. 84, pl. iii, fig. 2.

1896 C, p. 208, pl. lx, figs. 1, 2; pl. lxxvi, fig. 1;
pl. lxxxii.

1897 C, p. 511, fig. 77.

Woodward, A. S. 1898 B, p. 215, fig. 134.

Zittel, K. A. 1890 A, p. 750, figs. 662, 663.

Cretaceous (Laramie); Wyoming.

TOROSAURUS Marsh. Type *T. latus* Marsh.*Marsh, O. C.* 1891 E, p. 266.

1892 A, p. 81, pls. ii, iii.

1893 I, p. 438.

1895 C, p. 497.

1896 C, p. 214.

1898 B, p. 407.

Torosaurus gladius Marsh.*Marsh, O. C.* 1891 E, p. 266.

Dana, J. D. 1896 A, p. 846, fig. 1415.

Marsh, O. C. 1892 A, p. 81, pl. ii.

1896 C, p. 215, pl. lxii, fig. 2; lxiii, text fig. 54.

Cretaceous (Laramie); Wyoming.

Torosaurus latus Marsh.*Marsh, O. C.* 1891 E, p. 266.

1892 A, p. 81, pl. ii.

1896 C, p. 214, pl. lxii, fig. 1.

Cretaceous (Laramie); Wyoming.

MONOCLONIUS Cope. Type *M. crassus* Cope.*Cope, E. D.* 1876 H, p. 255.

Amer. Geologist, 1891 D.

Baur, G. 1890 E, p. 570.

1891 A.

1891 D, p. 450.

Cope, E. D. 1883 J, p. 99.

1889 Q, p. 716.

1889 T, p. 906.

Hatcher, J. B. 1896 A.

Marsh, O. C. 1895 C, p. 497.*Marsh, O. C.* 1896 C, p. 217.

Zittel, K. A. 1890 A, p. 752. (Syn? of Triceratops.)

Monoclonius crassus Cope.*Cope, E. D.* 1876 H, p. 255.

Baur, G. 1891 A.

Cope, E. D. 1877 G, p. 573.

1880 Q.

1886 E, fig. 2.

1889 Q, p. 715, pl. xxxiii, fig. 1.

Seeley, H. G. 1887 B.

Zittel, K. A. 1890 A, p. 752.

Cretaceous (Laramie); Montana.

Monoclonius fissus Cope.

Cope, E. D. 1889 Q, p. 717.

Cretaceous (Laramie); Montana.

Monoclonius recurvicornis Cope.

Cope, E. D. 1889 Q, p. 716, pl. xxxiv, fig. 1.

1877 G, p. 588, pl. xxxiv, figs. 7, 8. ("Dinosaurian.")

Zittel, K. A. 1890 A, p. 752.

Cretaceous (Laramie); Montana.

Monoclonius spheocerus Cope.

Cope, E. D. 1889 Q, p. 716, pl. xxxiii, fig. 3.

Osborn, H. F. 1898 N, pp. 842, 844, fig. 1. (Agathaum.)

1898 Q, p. 5, pl. i, fig. 1. (Agathaumus.)

Cretaceous (Laramie); Montana.

CERATOPS Marsh. Type *C. montanus* Marsh.

Marsh, O. C. 1888 C, p. 477.

Amer. Geologist 1891 D.

Baur, G. 1890 E, p. 570. (Monoclonius.)

1891 A.

1891 D, p. 450. (Monoclonius.)

Cope, E. D. 1889 T, p. 906. (Monoclonius.)

Hatcher, J. B. 1896 A.

Marsh, O. C. 1890 F, p. 4.

1891 C, p. 340.

1895 C, p. 497.

1896 C, p. 216.

Nicholson and Lydekker 1889 A, p. 1163.

Zittel, K. A. 1890 A, p. 751. (Syn.? of Polyonax.)

Ceratops alticornis Marsh.

Marsh, O. C. 1887 B, p. 323, figs. 1, 2. (Bison.)

Barbour, E. H. 1890 B, p. 392, figs. 5, 6.

Cope, E. D. 1889 A. (Polyonax.)

Marsh, O. C. 1889 E, p. 174.

1897 C, pp. 512, 527, figs. 79, 80.

Walcott, C. D. 1900 A, p. 23.

Cretaceous (Laramie); Colorado.

Ceratops montanus Marsh.

Marsh, O. C. 1888 C, p. 477, pl. xi.

1889 B, p. 327.

1890 A, p. 83.

1892 A, p. 84, pl. iii, fig. 4.

1896 C, p. 216, pl. lxiii, fig. 1.

Walcott, C. D. 1900 A, p. 23.

Cretaceous (Laramie); Montana.

Ceratops paucidens Marsh.

Marsh, O. C. 1889 C, p. 336. (Hadrosaurus.)

1890 A, p. 83.

Cretaceous (Laramie); Montana.

CLAORHYNCHUS Cope. Type *C. trihedrus* Cope.

Cope, E. D. 1892 T, p. 757.

Claorhynchus trihedrus Cope.

Cope, E. D. 1892 T, p. 757.

Cretaceous (Laramie); Montana?.

MANOSPONDYLUS Cope. Type *M. gigas* Cope.

Cope, E. D. 1892 T, p. 757.

Manospondylus gigas Cope.

Cope, E. D. 1892 T, p. 757.

Cretaceous (Laramie).

Superfamily IGUANODONTOIDEA nom. nov.

This group is referred to by the following writers under the name *Ornithopoda*, and regarded usually either as an order or a suborder.

Baur, G. 1883 A, p. 436.

1884 A.

1887 C, p. 102.

Cope, E. D. 1882 Q. (Orthopoda.)

1883 J, p. 98.

Dollo, L. 1892 C, p. 11. (Ornithopodes.)

Fürbringer, M. 1888 A.

1900 A.

Gadow, H. 1897 A, p. 205.

1898 A, p. 22.

Haeckel, E. 1895 A, p. 389.

Hulke, J. W. 1883 B. (On Hypsilophodon.)

Lydekker, R. 1888 B, p. 175.

1889 C.

Marsh, O. C. 1881 E, p. 423.

1882 A, p. 84.

1884 G.

1885 D, p. 764.

1887 C, p. 417.

1889 B, p. 328.

1894 E.

1895 C, p. 497.

1896 C, pp. 226, 243.

1896 D, p. 210.

Nicholson and Lydekker 1889 A, p. 1152.

Science 1885 B. -

Steinmann and Döderlein 1890 A, p. 665.

Vetter, B. 1885 A, p. 118.

Woodward, A. S. 1898 B, p. 205.

Zittel, K. A. 1890 A, pp. 693, 754.

CAMPTOSAURIDÆ.

- Marsh, O. C. 1881 E, p. 423. (Camptonotidæ.)
 Dollo, L. 1888 B. (Camptonotidæ.)
 Lydekker, R. 1888 B, p. 191. (Iguanodontidæ, in part.)
 Marsh, O. C. 1882 A, p. 84. (Camptonotidæ.)
 1884 G. (Camptonotidæ.)
 1885 A.
 1885 D.

- Marsh, O. C. 1895 C, p. 497. (Camptosauridæ, Laosauridæ.)
 1896 C, pp. 196, 243. (Camptosauridæ, Laosauridæ.)
 1896 D, p. 210. (Camptosauridæ, Laosauridæ.)
 Steinmann and Döderlein 1890 A, p. 665.
 Zittel, K. A. 1890 A, p. 755.

CAMPTOSAURUS Marsh. Type *Camptonotus dispar* Marsh.

- Marsh, O. C. 1885 A. (To replace *Camptonotus*, preoccupied.)
 Baur, G. 1883 A, p. 437. (*Camptonotus*.)
 Dollo, L. 1888 E. (*Camptonotus*.)
 Lydekker, R. 1888 B, p. 192.
 1889 C, p. 46.
 1890 A, p. 257.
 Marsh, O. C. 1879 H, p. 501. (*Camptonotus*, type *C. dispar*.)
 1881 A, p. 168.
 1894 A.
 1894 E, p. 85.
 1894 G.
 1895 C, p. 497.
 1896 C, pp. 196, 201.
 1897 C, p. 502.
 1899 A, p. 251.
 Nicholson and Lydekker 1889 A, pp. 1152, 1158.
 Steinmann and Döderlein 1890 A, p. 665.
 White, C. A. 1883 A.
 Williston, S. W. 1890 C, p. 472.
 Zittel, K. A. 1890 A, p. 755.

Camptosaurus amplus Marsh.

- Marsh, O. C. 1879 H, p. 503. (*Camptonotus*.)
 1885 A.
 1896 C, p. 196.
 Jurassic; Wyoming?

Camptosaurus dispar Marsh.

- Marsh, O. C. 1879 H, p. 501, pl. iii. (*Camptonotus*.)
 Fürbringer, M. 1900 A, p. 350.
 Lydekker, R. 1888 B, p. 192, fig. 36.
 Marsh, O. C. 1885 A.
 1892 G, p. 176, pl. v.
 1894 A, pl. vi.
 1894 E, p. 85, pl. v, fig. 1.
 1894 G, pl. vi.
 1896 C, p. 196, pls. liv, lvi.
 1896 D, pl. i, fig. 7.
 1897 C, p. 502, pl. xxiii.
 1899 A, p. 232, fig. 2.
 Williston, S. W. 1890 C. (*Cumnoria*.)
 Zittel, K. A. 1890 A, p. 756, fig. 666, B. C.
 Jurassic; Wyoming.

Camptosaurus medius Marsh.

- Marsh, O. C. 1894 E, p. 85, pl. iv.
 1896 C, p. 196, pl. liii.
 1897 C, p. 502, figs. 58, 59.
 Jurassic; Colorado?

Camptosaurus nanus Marsh.

- Marsh, O. C. 1894 E, p. 85, pl. v, fig. 3.
 1896 C, p. 196, pl. lv, fig. 2.
 Walcott, C. D. 1900 A, p. 23.
 Jurassic; Wyoming?

LAOSAURUS Marsh. Type *L. celer* Marsh.

- Marsh, O. C. 1878 B, p. 244.
 Giebel, C. G. 1879 A, p. 317.
 Marsh, O. C. 1878 F, p. 415.
 1879 B, pp. 89, 90.
 1879 H, p. 501.
 1894 E, p. 86.
 1895 C, p. 498.
 1896 C, pp. 199, 201.
 1897 C, p. 503.
 Nicholson and Lydekker 1889 A, p. 1159.
 Williston, S. W. 1878 A, p. 45.
 Zittel, K. A. 1890 A, p. 755.

Laosaurus celer Marsh.

- Marsh, O. C. 1878 B, p. 244.
 King, C. 1878 A, p. 346.
 Marsh, O. C. 1896 C, p. 199.
 Jurassic; Wyoming.

Laosaurus consors Marsh.

- Marsh, O. C. 1894 E, p. 87, pl. v, fig. 4; pl. vi, fig. 1; pl. vii, fig. 1.
 1895 C, pl. x, fig. 4.
 1896 C, p. 199, pl. lv, figs. 1, 3; pl. lvii; text fig. 61.
 1896 D, p. 199, pl. i, fig. 4; text fig. 6.
 1897 C, p. 503, pl. xxiv.
 Jurassic; Wyoming.

Laosaurus gracilis Marsh

- Marsh, O. C. 1878 B, p. 244.
 King, C. 1878 A, p. 436.
 Marsh, O. C. 1896 C, p. 199.
 Jurassic; Colorado.

DRYOSAURUS Marsh. Type *Laosaurus altus* Marsh.

- Marsh, O. C. 1894 E, p. 86.
 1895 C, p. 498.
 1896 C, pp. 198, 201.

Dryosaurus altus Marsh.

- Marsh, O. C. 1878 F, p. 415, pls. ix, x. (*Laosaurus*.)

- Marsh, O. C. 1879 A, pl. viii, fig. 1. (*Laosaurus*.)
 1892 G, p. 176. (*Laosaurus*.)
 1894 E, p. 86, pl. vii, fig. 2.
 1896 C, p. 198, pl. lv, fig. 4.
 Zittel, K. A. 1890 A, p. 756, fig. 666 A.
 Jurassic; Colorado, Wyoming.

IGUANODONTIDÆ.

- Andrews, C. W. 1897 A. (Iguanodon.)
 Baur, G. 1883 A, p. 437.
 1885 D. (Iguanodon.)
 1891 D. (Iguanodon.)
 Dollo L. 1882 B.
 1882 C.
 1883 A.
 1883 B.
 1883 C.
 1883 D.
 1884 B.
 Fürbringer, M. 1900 A, p. 353.
 Hulke, J. W. 1883 A.
 1884 A.
 1885 A.
 Huxley, T. H. 1870 D.
 Lydekker, R. 1888 B, p. 191.
 1889 L.
 Mantell, G. A. 1848 A. (Iguanodon.)
 1848 B, p. 40. (Iguanodon.)
 1849 A. (Iguanodon.)
 Marsh, O. C. 1884 G.
 1890 C, p. 425. (Claosauridæ.)
 1895 B, p. 411, pl. viii. (Iguanodon.)
 Marsh, O. C. 1895 C, p. 498. (Iguanodontidæ, Claosauridæ.)
 1896 C, pp. 230, 244. (Iguanodontidæ, Claosauridæ.)
 1896 D, p. 211. (Iguanodontidæ, Claosauridæ.)
 Nicholson and Lydekker 1889 A, p. 1140.
 Owen, R. 1842 A, p. 124. (Iguanodon.)
 1845 B, p. 246. (Iguanodon.)
 1851 B, p. 105. (Iguanodon.)
 1857 B, p. 1. (Iguanodon.)
 1860 B, p. 27. (Iguanodon.)
 1864 B, p. 19. (Iguanodon.)
 1872 A. (Iguanodon.)
 1874 A. (Iguanodon.)
 Pictet, F. J. 1853 A, p. 470. (Iguanodon.)
 Quenstedt, F. A. 1885 A, p. 184. (Iguanodon.)
 Sauvage, H. E. 1874 B, p. 12. (Iguanodon.)
 Seeley, H. G. 1887 B.
 1891 A, p. 253, fig. 15. (Iguanodon.)
 Woodward, A. S. 1898 B, p. 205. (Iguanodon.)
 Woodward, H. 1885 B. (Iguanodon.)
 1895 A.
 Zittel, K. A. 1890 A, p. 757.

THESPESIUS Leidy. Type *T. occidentalis* Leidy.

- Leidy, J. 1856 Q, p. 311.
 Cope, E. D. 1869 M, pp. 91, 98. (Syn. of Hadrosaurus.)
 1871 G, p. 52.
 Fürbringer, M. 1900 A, p. 350. (Claosaurus.)
 Hatcher, J. B. 1900 A, p. 719.
 Leidy, J. 1857 C.
 1860 A, p. 151.
 1865 A, p. 84.
 1870 J, p. 67.
 1874 A, p. 74.
 Lucas, F. A. 1900 C, p. 809. (Thespesius.)
 Marsh, O. C. 1890 C, p. 423. (Claosaurus, type *Hadrosaurus agilis* Marsh.)
 1892 G, p. 171. (Claosaurus.)
 1892 H. (Claosaurus.)
 1893 B, p. 83. (Claosaurus.)
 1893 F, p. 153. (Claosaurus.)
 1895 C, p. 498. (Claosaurus.)
 1896 C, p. 219. (Claosaurus.)
 1896 D. (Claosaurus.)
 1897 C, p. 516. (Claosaurus.)
 Woodward, A. S. 1898 B, p. 208. (Claosaurus.)
 Zittel, K. A. 1890 A, p. 763. (Claosaurus, Thespesius?).
 The genus *Claosaurus* is identified with *Thespesius* on the authority of Mr. F. A. Lucas, of the U. S. National Museum.
Thespesius agilis (Marsh.)
 Marsh, O. C. 1872 D. (Hadrosaurus.)
 Cope, E. D. 1874 C, p. 20. (Hadrosaurus.)
 1875 E, p. 247. (Hadrosaurus.)
 Marsh, O. C. 1877 C. (Hadrosaurus.)
 1890 C, p. 423, fig. 3. (Claosaurus.)
 1896 C, p. 219, fig. 55. (Claosaurus.)
 Nopce, F. B. 1899 A, p. 557. (Claosaurus.)
 Williston, S. W. 1898 C, p. 69.
 Zittel, K. A. 1890 A, p. 763, fig. 673. (Claosaurus.)
 Cretaceous (Niobrara); Kansas.
Thespesius occidentalis Leidy.
 Leidy, J. 1856 Q, p. 311.
 Cope, E. D. 1869 M, p. 98. (Hadrosaurus?).
 1871 G, p. 51. (Hadrosaurus.)
 1874 B, p. 446. (Hadrosaurus.)
 1874 C, p. 20. (Hadrosaurus.)
 1874 P, p. 10. (H. milo; no description.)
 1874 R. (Hadrosaurus.)
 1875 E, pp. 56, 248, pl. iii, figs. 5, 6 (Hadrosaurus); p. 58 (Agathaumas milo a synonym).
 Dana, J. D. 1896 A, p. 844, figs. 1408-1411. (Claosaurus annectens.)
 Fürbringer, M. 1900 A, p. 351, figs. 123, 125, 128. (Claosaurus annectens.)
 Hatcher, J. B. 1893 A, p. 143. (Claosaurus annectens.)
 Leidy, J. 1857 C, p. 91.
 1860 A, p. 151, pl. x, figs. 1-5. (Not figs. 6, 7, *fide* Leidy.)
 1865 A, p. 84.
 1870 J, pp. 67, 68.
 Lucas, F. A. 1900 C, p. 809.
 Marsh, O. C. 1892 E, p. 453, fig. 4. (Claosaurus annectens.)
 1892 G, p. 171, pls. ii, iii. (C. annectens.)
 1892 H, p. 344, pl. vi. (C. annectens.)
 1893 B, p. 83, pls. iv, v. (C. annectens.)
 1893 F, p. 155, pl. vii. (C. annectens.)
 1894 E, pl. vii, fig. 5. (C. annectens.)
 1895 C, pl. x, fig. 12. (C. annectens.)
 1896 C, p. 219, pls. lxxii-lxxiv; pl. lxxv, fig. 4; pl. lxxvi, fig. 2; pl. lxxvii, fig. 3; pl. lxxviii, fig. 2; pl. lxxix, fig. 5; pl. lxxx, fig. 3. (C. annectens.)

- Marsh, O. C. 1896 D, pl. i, fig. 12. (C. annectens.)
 1897 C, p. 517, pl. xxviii; text figs. 81, 82. (C. annectens.)
 Nopcsa, F. B. 1899 A. P. 556 (Hadrosaurus occidentalis): p. 557 (Claosaurus annectens).
- Woodward, A. S. 1898 B, p. 209, fig. 128. (C. annectens.)
 Cretaceous (Laramie); Wyoming, Colorado, South Dakota.

PTEROPELYX Cope. Type *P. grallipes* Cope.

- Cope, E. D. 1889 T, p. 904.
 1892 T, p. 758. (Claosaurus a synonym.)
 Marsh, O. C. 1892 H, p. 346.
 1896 C, p. 224.

Pteropelyx grallipes Cope.

- Cope, E. D. 1889 T, p. 904.
 Cretaceous; (Laramie) Montana.

TRACHODONTIDÆ.

- Lydekker, R. 1888 B, p. 241. (Replacing Hadrosauridæ.)
- Cope, E. D. 1869 M, p. 91. (Hadrosauridæ.)
 1883 J. (Hadrosauridæ.)
 1891 N, p. 43. (Hadrosauridæ.)
 1898 R, p. 70. (Hadrosauridæ.)
- Marsh, O. C. 1882 A, p. 84. (Hadrosauridæ.)
 1884 G. (Hadrosauridæ.)
 1885 D, p. 764. (Hadrosauridæ.)
- Marsh, O. C. 1890 C, p. 424.
 1895 C, p. 498.
 1896 C, p. 244.
 1896 D, p. 211.
- Nicholson and Lydekker 1889 A, p. 1153.
 Nopcsa, F. B. 1899 A. p. 556. ("Hadrosauriden").
 Steinmann and Döderlein 1890 A, p. 667.
 Zittel, K. A. 1890 A, p. 763. (Hadrosauridæ.)

TRACHODON Leidy. Type *T. mirabilis* Leidy.

- Leidy, J. 1856 F, p. 72.
- Baur, G. 1883 A, p. 439. (Hadrosaurus.)
- Cope, E. D. 1869 M, p. 91. (Hadrosaurus.)
 1871 G, p. 52. (Thespesius.)
 1874 B, p. 447. (Hadrosaurus.)
 1874 C, p. 22. (Hadrosaurus.)
 1875 E, p. 247. (Hadrosaurus.)
 1876 H, p. 253. (Diclonius, type *D. pentagonus*.)
 1877 V. (Diclonius.)
 1883 J, p. 99. (Hadrosaurus.)
 1883 CC. (Diclonius.)
 1884 F. (Diclonius.)
 1887 S, p. 338, pls. xv, xvi.
 1889 E. (Hadrosaurus.)
 1889 T, p. 904. (Diclonius.)
 1898 B, p. 71. (Diclonius.)
- Dollo, L. 1883 C, p. 211. (Hadrosaurus.)
 1884 B, p. 137, pl. vi, fig. 2. (Diclonius.)
- Foulke, W. P. 1858 A. (Hadrosaurus.)
- Gadow, H. 1897 A, p. 205. (Hadrosaurus, Diclonius.)
- Hawkins, B. W. 1874 A. (Hadrosaurus.)
 1875 A. (Hadrosaurus.)
- Leidy, J. 1856 C, p. 118. (Trachodon.)
 1858 A, p. 215. (Hadrosaurus, type *H. foulkii*, Leidy.)
 1859 A. (Hadrosaurus.)
 1865 A, p. 84. (Trachodon, Hadrosaurus.)
 1865 D, p. 71. (Hadrosaurus, Trachodon.)
 1868 F, p. 199. (Trachodon, Hadrosaurus.)
 1870 J, p. 67. (Hadrosaurus.)
- Lippincott, J. S. 1881 A. (Hadrosaurus.)
- Lydekker, R. 1886 C, p. 275, fig. 3. (Hadrosaurus.)
 1888 B, p. 243. (Trachodon.)
- Marsh, O. C. 1893 B, p. 85. (Hadrosaurus.)
 1895 C, p. 498.
 1896 C, p. 224.
- Nicholson and Lydekker 1889 A, p. 1153. (Trachodon.)
- Nopcsa, F. B. 1899 A, p. 555. (Hadrosaurus.)
 Osborn, H. F. 1893 B, p. 326. (Diclonius.)
 Owen, R. 1875 C, p. 74. (Hadrosaurus.)
 Steinmann and Döderlein 1890 A, p. 667 (Hadrosaurus); p. 668 (Diclonius).
 Woodward, A. S. 1890 A, p. 393. (Hadrosaurus.)
 Zittel, K. A. 1890 A, p. 763. (Hadrosaurus.)
- Trachodon breviceps** Marsh.
- Marsh, O. C. 1889 C, p. 335, figs. 4, 5. (Hadrosaurus.)
- Cope, E. D. 1889 T, p. 906. (Hadrosaurus.)
- Hatcher, J. B. 1896 A, p. 116. (Hadrosaurus.)
- Marsh, O. C. 1890 C, p. 423, figs. 1, 2. (Hadrosaurus.)
 1896 C, pl. lxxv, figs. 1, 2. (Trachodon.)
 Nopcsa, F. B. 1899 A, p. 557. (Hadrosaurus.)
 Zittel, K. A. 1890 A, p. 765, fig. 676. (Hadrosaurus.)
 Cretaceous (Laramie); Montana.
- Trachodon calamarius** (Cope).
- Cope, E. D. 1876 H, p. 255. (Diclonius.)
 1877 G, pp. 572, 588. (Diclonius.)
 Cretaceous (Laramie); Montana.
- Trachodon cavatus** (Cope).
- Cope, E. D. 1871 G, p. 50. (Hadrosaurus.)
 1875 E, p. 248. (Hadrosaurus.)
 Nopcsa, F. B. 1899 A, p. 557. (Hadrosaurus.)
 Cretaceous; New Jersey.
- Trachodon foulkii** Leidy.
- Leidy, J. 1858 A. (Hadrosaurus.)
- Cope, E. D. 1867 E, p. 27. (Hadrosaurus.)
 1869 B, p. 736. (Hadrosaurus.)
 1869 M, p. 98. (Hadrosaurus.)
 1875 E, p. 247. (Hadrosaurus.)
- Emmons, E. 1860 A, p. 208, fig. 180^e. (Hadrosaurus.)

- Leidy, J. 1859 ^{*}A. (*Hadrosaurus*.)
 1865 A, pp. 76, 118, pl. ii, figs. 9-11; pl. viii, fig. 13; pl. xii, figs. 1-20; pl. xiii, figs. 1-19, 24-26; pl. xiv, figs. 1-12; pl. xv, figs. 1-6; pl. xvi, figs. 1-8; pl. xvii, figs. 1-5; pl. xx, figs. 1, 2. (*Hadrosaurus*.)
 1865 D, p. 70. (*Hadrosaurus*.)
 1868 F, p. 199. (*Trachodon*.)
 1870 J, p. 68. (*Hadrosaurus*.)
 Lydekker, R. 1888 B, p. 224, fig. 50.
 Nicholson and Lydekker 1889 A, p. 1153, fig. 1053.
 Nopcsa, F. B. 1899 A, p. 556. (*Hadrosaurus*.)
 Zittel, K. A. 1890 A, p. 764, fig. 674.
 Cretaceous; New Jersey.

Trachodon longiceps Marsh.

- Marsh, O. C. 1890 C, p. 422.
 Nopcsa, F. B. 1899 A, p. 557. (*Hadrosaurus*.)
 Cretaceous (Laramie); Wyoming.

Trachodon minor (Marsh).

- Marsh, O. C. 1870 F. (*Hadrosaurus*.)
 Cope, E. D. 1869 M (1870), p. 122 J. (*Hadrosaurus*.)
 1875 E, p. 247. (*Hadrosaurus*.)
 Leidy, J. 1870 J, p. 68.
 Nopcsa, F. B. 1899 A, p. 557. (*Hadrosaurus*.)
 Cretaceous; New Jersey.

Trachodon mirabilis Leidy.

- Leidy, J. 1856 F, p. 72.
 Cope, E. D. 1869 M, p. 98. (*Hadrosaurus*.)
 1874 C, pp. 8, 19. (*Hadrosaurus*.)
 1875 E, pp. 56, 247. (*Hadrosaurus*.)
 1877 G, p. 573. (*Trachodon*.)
 1883 C. (*Diclonius*.)
 1883 J. pls. iv-vii. (*Diclonius*.)
 1883 CC. (*Diclonius*.)
 1884 F. (*Diclonius*.)
 1885 R, pl. xxxvii, figs. 1-3. (*Diclonius*.)

- Cope, E. D. 1886 E, fig. 1. (*Diclonius*.)
 1891 N, p. 44, fig. 22. (*Diclonius*.)
 1898 B, p. 71, fig. 23. (*Diclonius*.)
 Lambe, L. M. 1899 A, p. 69.
 Leidy, J. 1856 C, p. 118.
 1860 A, p. 140, pl. ix, figs. 1-20.
 1870 J, p. 68. (*Hadrosaurus*.)
 Marsh, O. C. 1892 H, p. 344. (*Hadrosaurus*.)
 Nopcsa, F. B. 1899 A, p. 556. (*Hadrosaurus*.)
 Osborn, H. F. 1898 N, pp. 842, 844, fig. 2. (*Hadrosaurus*.)
 1898 Q, p. 6, pl. i, fig. 2. (*Hadrosaurus*.)
 Zittel, K. A. 1890 A, p. 764, fig. 675. [*Hadrosaurus* (*Diclonius*).]
 Cretaceous (Laramie); Montana, British America.

Trachodon pentagonus (Cope).

- Cope, E. D. 1876 H, p. 253. (*Diclonius*.)
 1877 G, pp. 572, 594. (*Diclonius*.)
 1888 T, p. 905. (*Diclonius*.)
 Cretaceous (Laramie); Montana.

Trachodon perangulatus (Cope).

- Cope, E. D. 1876 H, p. 254. (*Diclonius*.)
 1877 G, pp. 572, 588. (*Diclonius*.)
 Cretaceous (Laramie); Montana.

Trachodon tripes (Cope).

- Cope, E. D. 1869 I. (*Hadrosaurus*.)
 1869 M, p. 122 I. (*Hadrosaurus*.)
 1870 J, p. 68. (*Hadrosaurus*.)
 1871 M, p. 214. (*Hadrosaurus*.)
 1875 E, p. 247. (*Hadrosaurus*.)
 1875 V, p. 40, pl. v, figs. 1, 2. (*Hadrosaurus*.)
 1878 EE. (*Hadrosaurus*.)
 Leidy, J. 1870 J, p. 68. (*Hadrosaurus*.)
 Nopcsa, F. B. 1899 A, p. 557. (*Hadrosaurus*.)
 Cretaceous; North Carolina, Georgia.

CIONODON Cope. Type *C. arctatus* Cope.

- Cope, E. D. 1874 P, p. 10. (*Cinodon, errore typog.*)
 1874 B, p. 447.
 1874 C, p. 21.
 1875 E, pp. 57, 246.
 1875 W, p. 334.
 1876 H, p. 253.
 1877 V.
 1883 J, p. 99.
 Lydekker, R. 1886 C, p. 276.
 Marsh, O. C. 1895 C, p. 498.
 Steinmann and Döderlein 1890 A, p. 667.
 Zittel, K. A. 1890 A, p. 765.

Cionodon arctatus Cope.

- Cope, E. D. 1874 P, p. 10.

- Cope, E. D. 1874 B, pp. 448, 449.
 1874 C, p. 22.
 1874 F.
 1875 E, pp. 60, 246, pls. i, ii.
 1877 G, p. 597.
 Nopcsa, F. B. 1899 A, p. 557.
 Cretaceous (Laramie); Colorado.

Cionodon stenopsis Cope.

- Cope, E. D. 1875 I.
 1875 E, pp. 63, 247.
 1875 W, p. 335.
 Nopcsa, F. B. 1899 A, p. 557.
 Cretaceous (Laramie); Saskatchewan.

DYSGANUS Cope. Type *D. encrastus* Cope.

- Cope, E. D. 1876 H, p. 250.
 1883 J, p. 99.
 1890 D.
 Zittel, K. A. 1890 A, p. 765.
 A genus of uncertain affinities.

Dysganus bicarinatus Cope.

- Cope, E. D. 1876 H, p. 252.
 1877 G, p. 572.
 Cretaceous (Laramie); Montana.

Dysganus encaustus Cope.

Cope, E. D. 1876 H, p. 250.
1877 G, p. 572.
Cretaceous (Laramie); Montana.

Dysganus haydenianus Cope.

Cope, E. D. 1876 H, p. 251.

ORNITHOTARSUS Cope.

Cope, E. D. 1869 H, p. 123.
1869 M, p. 120.
1883 J, p. 99.
Morse, E. S. 1880 A, p. 7.
Zittel, K. A. 1890 A, p. 765.

Ornithotarsus immanis Cope.

Cope, E. D. 1869 H, p. 123.

PNEUMATOARTHURUS Cope.

Cope, E. D. 1870 I, p. 446.
1875 E, p. 260. (Pneumatarthrus.)
1878 I, p. 236. (Pneumatarthrus.)
Zittel, K. A. 1890 A, p. 765. (Syn.? of Ornithotar-
sus.)

Pneumatoarthrus peloreus Cope.

Cope, E. D. 1870 I, p. 446.

Cope, E. D. 1877 G, pp. 572, 596.
Cretaceous (Laramie); Montana.

Dysganus peiganus Cope.

Cope, E. D. 1876 H, p. 252.
1877 G, p. 572.
Cretaceous (Laramie); Montana.

Type *O. immanis* Cope.

Cope, E. D. 1869 D.
1869 M, p. 121, figs. 35-36a.
1875 E, p. 248.
1885 R.
Nopcea, F. B. 1899 A, p. 577.
Cretaceous; New Jersey.

Type *P. peloreus* Cope.

Cope, E. D. 1872 L, p. 433. (Pneumatarthrus.)
1875 E, p. 260. (Pneumatarthrus.)
Leidy, J. 1865 A, p. 100, pl. xiii, figs. 27, 28. (Young?
of Hadrosaurus.)
Cretaceous; New Jersey.

NANOSAURIDÆ.

Marsh, O. C. 1878 B, p. 244.
1895 C, p. 498.
1896 C, p. 244.

Marsh, O. C. 1896 D, p. 211.
Zittel, K. A. 1890 A, p. 766.

NANOSAURUS Marsh. Type *N. agilis* Marsh.

Marsh, O. C. 1877 D, p. 254.
1891 F, p. 337.
1894 E, p. 87.
1895 C, p. 498.
1896 C, pp. 199, 201, 202.
1897 C, p. 483.
Nicholson and Lydekker 1889 A, p. 1059.
Steinmann and Döderlein 1890 A, p. 624.
Williston, S. W. 1878 A, p. 45.
Zittel, K. A. 1890 A, p. 766.

Nanosaurus agilis Marsh.

Marsh, O. C. 1877 D, p. 254.

King, C. 1878 A, p. 346.
Marsh, O. C. 1894 E, pl. vi, fig. 3.
1896 C, p. 199, text figs. 42, 43.
1897 C, p. 484, figs. 27, 28.
Jurassic; Colorado.

Nanosaurus rex Marsh.

Marsh, O. C. 1877 G, p. 516.
King, C. 1878 A, p. 346.
Marsh, O. C. 1894 E, p. 88, pl. vi, fig. 5.
1896 C, p. 200, text figs. 44-48.
1897 C, p. 484, fig. 29.
Jurassic; Colorado.

MACEOLOGNATHIDÆ.

Marsh, O. C. 1884 C, p. 341.

Woodward, A. S. 1887 C, p. 8.

MACEOLOGNATHUS Marsh. Type *M. vagans* Marsh.

Marsh, O. C. 1884 C, p. 341.
Amer. Geologist, 1891 D.
Baur, G. 1891 D, p. 450. (Cœlurus.)
Marsh, O. C. 1897 C, p. 508.
Nicholson and Lydekker 1889 A, p. 1089.
Zittel, K. A. 1890 A, p. 513.

For this genus Professor Marsh has estab-
lished the family *Macelognathidæ* and the order

Macelognatha, and assigned them a place among
the *Testudinata*. The relationships of the fossil
are problematical.

Macelognathus vagans Marsh.

Marsh, O. C. 1884 C, p. 341, figure.
1897 C, p. 507, figs. 65, 66.
Jurassic; Wyoming.

APATODON Marsh. Type *A. mirus* Marsh.

Marsh, O. C. 1877 D, p. 255.

Baur, G. 1890 C, p. 301.

A doubtful genus of doubtful position.

Apatodon mirus Marsh.

Marsh, O. C. 1877 D, p. 255.

Jurassic; Rocky Mountain region.

BRACHYROPHUS Cope. Type *B. altarkansanus* Cope.

Cope, E. D. 1878 H, p. 390.

Even the ordinal portion of this genus is doubtful.

Brachyrophus altarkansanus Cope.

Cope, E. D. 1878 H, p. 390.

Jurassic; Colorado.

Order PTEROSAURI Kaup.

Kaup, J. 1834, Isis, p. 315.

Baur, G. 1887 A, p. 487. (Ornithosauria.)

1887 C, p. 101. (Ornithosauria.)

1889 G. (Pterosauria.)

1891 C, p. 355. (Pterosauria.)

Blainville, H. M. D., 1835, Nouv. Ann. Mus., iv, p. 238. (Pterodactylia.)

Bonaparte, C. L., 1838, Nuovi Ann. Sci. Nat. Bologna, i, p. 391. (Ornithosauri.)

Cope, E. D. 1869 M, pp. 26, 28, 169, and ii. (Pterosauria.)

1871 B, p. 234. (Ornithosauria.)

1885 G, p. 246. (Ornithosauria.)

1887 S, p. 333. (Ornithosauria.)

1889 R, p. 863. (Ornithosauria.)

1891 N, p. 41. (Ornithosauria.)

1892 R. (Pterosauria.)

1898 B, pp. 56, 67. (Ornithosauria.)

1900 A, p. 160. (Ornithosauria.)

Fürbringer, M. 1900 A, pp. 355, 527, 660. (Pata-giosauria.)

Gadow, H. 1898 A, p. 23. (Pterosauria.)

Gaudry, A. 1890 C, p. 235.

Günther, A. 1886 A, p. 443. (Ornithosauria.)

Haeckel, E. 1895 A, p. 390. (Pterosauria.)

Hawkins, B. W. 1874 A. (Ornithosauria.)

Hay, O. P. 1899 F, p. 682.

Huxley, T. H. 1872 A, p. 228. (Pterosauria.)

Kehner, F. A. 1876 A. (Pterosauria.)

Lortet, L. 1892 A, p. 128. (Pterosauria.)

Lydekker, R. 1888 B, p. 2 (Ornithosauria); p. 3 (Pteranodontia, Pterosauria.)

Marsh, O. C. 1876 E. (>Pteranodontia.)

1876 G. (>Pteranodontia.)

1876 I. (>Pteranodontia.)

1877 E. (Pterosauria, Pteranodontia.)

1881 D. (>Pteranodontia.)

1882 B. (Pterosauria, Pteranodontia.)

1884 D. (Pterosauria, Pteranodontia.)

Meyer, H. 1851 A. (Pterosauria.)

1860 A. (Pterosauria.)

1860 D. (Pterosauria.)

Newton, E. T. 1888 A. (Ornithosauria.)

1889 B. (Ornithosauria.)

Nicholson and Lydekker 1889 A, p. 1196 (Ornithosauria); p. 1198 (Pteranodontia); p. 1199 (Pterosauria.)

Owen, R. 1840. (Pterosauria.)

1851 A. (Pterosauria.)

1859 A. (Pterosauria.)

1859 B. (Pterosauria.)

1860 A, p. 162. (Pterosauria.)

1860 B. (Pterosauria.)

1860 C. (Pterosauria.)

1860 E, p. 244. (Pterosauria.)

1866 A. (Pterosauria.)

1870 A. (Pterosauria.)

1874 B. (Pterosauria.)

Pictet, F. J. 1853 A, p. 522. ("Ptérodactyliens.")

Plieninger, F. 1895 A. (Pterosauria.)

Quenstedt, F. A. 1852 A, p. 135. (Pterodactyli.)

1885 A, p. 219. Pterosauri.)

Seeley, H. G. 1865 A. (Saurornia.)

1866 A. (Saurornia.)

1870 A, p. 151. (Ornithosauria.)

1870 B. (Ornithosauria.)

1871 C. (Ornithosauria.)

1876 A. (Ornithosauria.)

1891 A. (Ornithosauria.)

1891 B. (Ornithosauria.)

Steinmann and Döderlein, 1890 A, p. 647. (Pterosauria.)

Williston, S. W. 1892 A. (Pterosauria.)

1897 A. (Pterosauria.)

Woodward, A. S. 1898 B, p. 224. (Ornithosauria.)

Woodward, H. 1871 A. (Ornithosauria.)

Zittel, K. A. 1882 A. (Pterosauria.)

1890 A, pp. 450, 773, 779. (Pterosauria.)

ORNITHOCEPHALIDÆ nom. nov.

This family, unless otherwise indicated, is denominated by the following authors *Pterodactylidæ*.

Bowerbank, J. S. 1851 A.

Cope, E. D. 1893 F.

Fürbringer, M. 1900 A.

Haeckel, E. 1895 A, p. 397. (Pterodactylidæ.)

Huxley, T. H. 1876 B, xiii, p. 515.

Lydekker, R. 1888 B, p. 3.

Nicholson and Lydekker 1889 A, p. 1199.

Owen, R. 1851 A.

Owen, R. 1859 A.

1859 D.

1860 B.

Quenstedt, F. A. 1885 A, p. 219.

Seeley, H. G. 1866 A.

1870 B, p. 111. (Pterodactylæ.)

1876 A.

Steinmann and Döderlein 1890 A, p. 650.

Williston, S. W. 1892 A, p. 12. (Pterodactylinæ.)

1897 A.

Zittel, K. A. 1890 A, p. 791.

ORNITHOCEPHALUS Sömm. Type *O. antiquus* Sömm.

Sömmerring, S. T., 1812, Denkschr. k. Akad. München, iii, p. 126.

Unless otherwise indicated the following authors refer to this genus under the name *Pterodactylus*. The latter name is usually credited to Cuvier, 1809, Ann. Mus., xiii, p. 424. There, however, we find only the French term *Ptero-dactyle*. Even in case this is a misprint for *Pterodactyle*, it is inadmissible as a generic name. *Pterodactylus* appears to have been used first in 1824 by Cuvier.

Bowerbank, J. S. 1848 A.

1851 A.

Cope, E. D. 1872 F, p. 337. (*Ornithochirus*, not of Seeley.)

1879 A, p. 35.

1893 F.

Cuvier, G. 1834 A, x, pp. 215-263, pl. ccli.

Dennis, J. B. P. 1861 A.

Hallmann, E. 1837 A, p. 20.

Huxley, T. H. 1872 A, p. 228.

Lortet, L. 1888 B, p. 4.

Lydekker, R. 1888 B, p. 4.

Meyer, H. 1860 D, p. 85.

1861 B.

Newton, E. T. 1888 A.

Nicholson and Lydekker 1889 A, p. 1200.

Owen, R. 1845 B, p. 273, pl. lxiii A.

1851 A.

1851 B, p. 80.

1859 B.

1859 D, p. 1.

1860 A, p. 163.

1860 B, p. 1.

1860 C.

1870 A.

1874 B.

Pictet, F. J. 1853 A, p. 524.

Quenstedt, F. A. 1858 A.

Seeley, H. G. 1865 A.

1870 A.

1870 B, p. 111.

1871 C.

1876 A.

1891 A.

Steinmann and Döderlein 1890 A, p. 650.

Wagner, A. 1851 B, p. 180. (*Ornithocephalus*.)

Winckler, T. C. 1874 A.

Zittel, K. A. 1890 A, p. 771.

At present no American species is assigned to this genus.

DERMODACTYLUS Marsh. Type *Pterodactylus montanus* Marsh.

Marsh, O. C. 1881 D, p. 342.

Nicholson and Lydekker 1889 A, p. 1201.

Zittel, K. A. 1890 A, p. 798.

The relationships of this genus are somewhat obscure.

Dermodactylus montanus Marsh.

Marsh, O. C. 1878 E, p. 233. (*Pterodactylus*.)

1881 D.

1897 C, p. 508.

Jurassic; Wyoming.

PTERANODONTIDÆ.

Marsh, O. C. 1876 E, p. 507.

Cope, E. D. 1898 B, p. 67.

Fürbringer, M. 1888 A.

1900 A.

Marsh, O. C. 1884 D.

1897 C, p. 509. (*Pteranodontia*.)

Nicholson and Lydekker 1890 A, p. 1199.

Steinmann and Döderlein 1890, A, p. 650.

Williston, S. W. 1892 A. (*Pteranodontinæ*.)

1893 B. (*Ornithostomatidæ*.)

1897 A, p. 36. (*Ornithostomatinae*.)

Zittel, K. A. 1890 A, p. 798.

PTERANODON Marsh. Type *P. longiceps* Marsh.

Marsh, O. C. 1876 E, p. 507.

Since the question of the identity of *Pteranodon* Marsh and *Ornithostoma* Seeley has been raised, references to the literature of the latter genus are here included.

Cope, E. D. 1893 F.

Grinnell, G. B. 1881 A, p. 257.

Marsh, O. C. 1876 G, p. 59.

1876 I.

1881 D.

1882 B, p. 253.

1884 D.

1897 C, p. 509.

Newton, E. T. 1888 A, p. 418 (*Ornithostoma*); p.

419 (*Pteranodon*).

Nicholson and Lydekker 1889 A, p. 1199.

Seeley, H. G. 1871 C, p. 35. (*Ornithostoma*.)

Seeley, H. G. 1876 B, p. 499. (*Ornithostoma*.)

1891 B, p. 442. (*Ornithostoma*.)

Steinmann and Döderlein 1890 A, p. 651.

Williston, S. W. 1891 B.

1892 A, pp. 1, 3, pl. i.

1893 B. (*Ornithostoma*.)

1895 B. (*Ornithostoma*.)

1896 B, pl. i. (*Ornithostoma*.)

1897 A. (*Ornithostoma*.)

Woodward, A. S. 1898 B, p. 229.

Zittel, K. A. 1890 A, p. 799.

Pteranodon comptus Marsh.

Marsh, O. C. 1876 E, p. 509.

Williston, S. W. 1892 A, p. 2.

Cretaceous (Niobrara); Kansas.

Pteranodon ingens Marsh.

- Marsh, O. C. 1872 B, p. 246. (Pterodactylus.)
 Amer. Naturalist, 1872 A. (Pterodactylus.)
 Cope, E. D. 1872 F, p. 337. (Ornithochirus umbrosus.)
 1872 K, p. 42. (Ornithochirus umbrosus.)
 1874 C, p. 26. (Pterodactylus umbrosus, P. ingens.)
 1875 E, p. 249 (Pterodactylus ingens); pp. 48, 65, 247, pl. vii, figs. 1-4 (P. umbrosus).
 Marsh, O. C. 1872 S, p. 578. (Pterodactylus.)
 1872 T, p. 496. (Pterodactylus.)
 1876 E, p. 508.
 1876 I, p. 480.
 1884 D, p. 426.
 Williston, S. W. 1891 B, p. 1124. (P. umbrosus.)
 1892 A, p. 2. (P. ingens; P. umbrosus.)
 1893 B, figure. (Ornithostoma.)
 1897 A, pl. ii, text figs. 1, 2. (Ornithostoma.)
 1897 H, p. 245. (Ornithostoma.)
 Cretaceous (Niobrara); Kansas.

Pteranodon longiceps Marsh.

- Marsh, O. C. 1876 E, p. 598.
 Lydekker, R. 1888 B, p. 3, fig. 1.
 Marsh, O. C. 1876 I, p. 480.
 1884 D, pl. xv.
 1897 C, p. 510, figs. 71-74.
 Williston, S. W. 1891 B, p. 1124.
 1892 A, p. 2.
 Woodward, A. S. 1898 B, p. 229, fig. 140.
 Zittel, K. A. 1890 A, p. 799, fig. 694.
 Cretaceous; Kansas.

Pteranodon nanus Marsh.

- Marsh, O. C. 1881 D, p. 343.
 Williston, S. W. 1892 A, p. 2.
 Cretaceous; Kansas.

Pteranodon occidentalis Marsh.

- Marsh, O. C. 1872 B, p. 241. (Pterodactylus.)
 Cope, E. D. 1871 C. (Pterodactylus owenii Marsh, not of Seeley.)
 1872 F, p. 337. (Ornithochirus harpygia.)
 1872 K, p. 471. (Ornithochirus harpygia.)
 1874 C, p. 26. (Pterodactylus.)
 1875 E, pp. 48, 66, 249, pl. vii, figs. 5, 6. (Pterodactylus.)
 Marsh, O. C. 1871 C, p. 472. (Pterodactylus owenii.)
 1872 S, p. 578. (Pterodactylus.)
 1872 T, p. 496. (Pterodactylus.)
 1876 E, p. 508.
 1884 D, p. 423.
 1897 C, p. 527.
 Williston, S. W. 1892 A, p. 1.
 Cretaceous (Niobrara); Kansas.

Pteranodon velox Marsh.

- Marsh, O. C. 1872 B, p. 247. (Pterodactylus.)
 Cope, E. D. 1874 C, p. 26. (Pterodactylus.)
 1875 E, p. 250. (Pterodactylus.)
 Marsh, O. C. 1872 T, p. 496. (Pterodactylus.)
 1876 I, p. 480.
 Williston, S. W. 1892 A, p. 2.
 Cretaceous (Niobrara); Kansas.

NYCTOSAURIDÆ.

- Nicholson and Lydekker 1889 A, p. 1199. (Family suggested.) | Williston, S. W. 1897 A, p. 36. (Nyetodaetylinae.)

NYCTOSAURUS Marsh. Type *Pteranodon gracilis* Marsh.

- Marsh, O. C. 1876 I, p. 480.
 Cope, E. D. 1893 F. (Nyetodaetylus.)
 Marsh, O. C. 1881 D, p. 343. (Nyetodaetylus, to replace Nyctosaurus.)
 Newton, E. T. 1888 A, p. 420. (Nyetodaetylus.)
 Nicholson and Lydekker 1889 A, p. 1199. (Nyetodaetylus.)
 Williston, S. W. 1892 A, p. 2. (Nyetodaetylus.)
 1897 A, p. 39. (Nyetodaetylus.)

- Williston, S. W. 1897 H, p. 245. (Nyetodaetylus.)
 Zittel, K. A. 1890 A, p. 799. (Nyetodaetylus.)

Nyctosaurus gracilis Marsh.

- Marsh, O. C. 1876 E, p. 508. (Pteranodon.)
 1876 I, p. 480.
 1881 D, p. 343. (Nyetodaetylus.)
 Williston, S. W. 1892 A, pp. 3, 5. (Nyetodaetylus.)
 Cretaceous; Kansas.

Order LORICATA Merrem.

Merrem, B., 1820, Tentamen Syst. Amphib., p. 7.
 Unless otherwise indicated the following authorities apply the name *Crocodylia* to this group.

- Baur, G. 1885 E, p. 633.
 1886 G, pp. 689, 738
 1886 J.
 1887 A, p. 487.
 1887 C, p. 101.
 1889 C, p. 240.
 1891 C, p. 355.
 1894 A, p. 323.
 1895 D.

- Boulenger, G. A. 1889 A, p. 273. (Emydosauria.)
 1896 B.
 Burckhardt, R. 1895 A.
 Cope, E. D. 1869 M, pp. 32, 61.
 1871 B.
 1889 R, p. 863.
 1891 N, p. 45.
 1892 R.
 1898 B, pp. 56, 73. (Loricata.)
 1900 A, p. 161. (Loricata.)
 Cuvier, G. 1834 A, ix, pp. 25-344, pls. cccxxix-ccxxxviii.
 Delongchamps-Eudes, E. 1870 A.

- Dollo, L. 1883 E.
 Fürbringer, M. 1888 A.
 1900 A, pp. 297, 527, 596, 649.
 Gadow, H. 1896 A, p. 38.
 1898 A. p. 18.
 Gaupp, E. 1895 B.
 Gegenbaur, C. 1864 A, pp. 32, 87.
 1865 B, p. 32.
 Günther, A. 1886 A, p. 444.
 Haeckel, E. 1895, p. 358.
 Hallmann, E. 1837 A, p. 16.
 Hay, O. P. 1899 F, p. 682. (Loricata.)
 Hoffmann, C. K. 1876 A.
 1878 A.
 1879 A, p. 102.
 1890 B.
 Hulke, J. W. 1888 A.
 Huxley, T. H. 1859 B.
 1870 A, p. 440.
 1872 A, p. 214.
 1875 B.
 1876 B, xiii, pp. 430, 467, 514.
 Kehner, F. A. 1876 A.
 Koken, E. 1883 A, p. 792.
 1887 A, p. 84.
 1888 B.
 Kükenthal, W. 1893 A.
 Leidy, J. 1871 C, p. 367.
 Lortet, L. 1892 A, p. 91.
 Ludwig, R. 1877 A.
 Lydekker, R. 1888 B, p. 42.
- Lydekker, R. 1893 E, p. 139.
 Marsh, O. C. 1877 E.
 1885 D.
 Mivart, St. G. 1886 A.
 Müller, J. 1831 A, pp. 199, 238.
 Nicholson and Lydekker 1889 A, p. 1180.
 Owen, R. 1842 A, p. 65.
 1845 B, p. 285.
 1850 A.
 1850 B, p. 521.
 1860 A, p. 164.
 1860 E, p. 271.
 1866 A.
 1878 A.
 1879 A.
 Parker, W. K. 1868 A, p. 126.
 1879 B, p. 81.
 1883 A.
 Pictet, F. J. 1853 A, p. 475. ("Crocodiliens.")
 Röse, C. 1893 B.
 1895 A.
 Seeley, H. G. 1888 H. p. 131.
 Stannius, H. 1856 A.
 Steinmann and Döderlein 1890 A, p. 651.
 Tomes, C. S. 1898 A, p. 268.
 Tornier, G. 1888 A.
 Wiedersheim, R. 1889 A, p. 438.
 Woodward, A. S. 1886 D.
 1898 B, p. 216.
 Zittel, K. A. 1890 A, pp. 450, 633, 647, 683.

Suborder PARASUCHIA Huxley.

- Huxley, T. H. 1875 B, p. 427.
 Baur, G. 1894 A, p. 123. (Phytosauria.)
 Cope, E. D. 1869 M, pp. 32, 56. (Thecodontia.)
 1889 R, p. 865.
 1900 A, p. 161.
 Fürbringer, M. 1900 A, p. 302.
 Gadow, H. 1898 A. p. 19.
 Haeckel, E. 1895 A. p. 364.
 Koken, E. 1887 A, p. 98.
 1888 B, p. 763.
- Lydekker, R. 1888 B, p. 123.
 1890 A, p. 235.
 Marsh, O. C. 1895 C, p. 485.
 1896 B, p. 59. (Belodontia.)
 1896 D, p. 199. (Belodontia.)
 Owen, R. 1860 A, p. 163. (Thecodontia.)
 Woodward, A. S. 1898 B, p. 217.
 Zittel, K. A. 1890 A, p. 637.

PHYTOSAURIDÆ.

- Lydekker, R. 1888 B, p. 123.
 Baur, G. 1886 G, p. 740. (Belodontidæ.)
 1887 A, p. 487. (Belodontidæ.)
 1887 C, p. 102. (Belodontidæ.)
- Cope, E. D. 1898 B, p. 73. (Belodontidæ.)
 Nicholson and Lydekker 1889 A, p. 1183. (Phytosauridæ.)

PHYTOSAURUS Jaeger. Type *P. cylindricodon* Jaeger.

- Jaeger, G. F. 1828 A, p. 22.
 Baur, G. 1886 G, p. 740. (Belodon.)
 1887 A, p. 487. (Belodon.)
 1894 A. (Phytosaurus.)
 Cope, E. D. 1866 D. (Rhytidodon, emendation of Rutiodon.)
 1869 M, p. 56. (Belodon.)
 1870 I, p. 444. (Belodon.)
 1879 A, p. 34. (Belodon.)
 1888 U, p. 916. (Belodon.)
 1889 E. (Belodon.)
 Emmons, E. 1856 A, p. 30. (Rutiodon, type *R. carolinensis*.)
- Fürbringer, M. 1900 A, p. 302.
 Huxley, T. H. 1869 A.
 1875 B.
 Koken, E. 1887 A, p. 96.
 1888 B, p. 764.
 Lea, I. 1856 B, p. 123. (Centemodon.)
 1856 A, p. 78. (Centemodon, type *C. sulcatus*.)
 Leidy, J. 1856 J, p. 165. (Compososaurus, type *C. priscus*.)
 1856 L, p. 256. (Omosaurus, type *O. perplexus*.)
 Lydekker, R. 1888 B, p. 123.

- Lydekker, R. 1890 A, p. 235.
 Marsh, O. C. 1877 E. (Belodon.)
 1895 C, p. 485. (Belodon.)
 1896 B, p. 61. (Belodon; Rhytidodon.)
 1896 D, p. 199. (Belodon.)
 Meyer, H. 1842, Neues Jahrb. Mineral., p. 302.
 (Belodon, type *B. plieningeri* Meyer.)
 1855 A, p. 148. (Belodon.)
 1861 A, pls. xxxviii-xlvii. (Belodon.)
 1863 A, pls. xxxviii-xlii. (Belodon.)
 1865 B, pls. xxiii-xxix. (Belodon.)
 Nicholson and Lydekker 1889 A, p. 1183.
 Pictet, F. J. 1853 A, p. 514.
 Plieninger, Th. 1852 A. (Belodon.)
 Quenstedt, F. A. 1850 B, p. 23.
 1852 A, p. 110. (Belodon.)
 Steinmann and Döderlein 1890 A, p. 652. (Belodon.)
 Woodward, A. S. 1886 D, p. 300, fig. 5.
 1898 B, p. 218. (Belodon.)
 Zittel, K. A. 1890 A, p. 638. (Belodon.)
- Phytosaurus buceros (Cope).**
Cope, E. D. 1881 W, p. 922. (Belodon.)
 1887 A, p. 217, pl. ii. (Belodon.)
 1887 J. (Belodon.)
 1888 U, p. 916, pl. xvii, fig. 1. (Belodon.)
 1891 N, p. 46, fig. 23. (Belodon.)
 1898 B, p. 72, fig. 24. (Belodon.)
 Triassic; New Mexico.
- Phytosaurus carolinensis (Emmons).**
Emmons, E. 1856 A, p. 307, fig. 22; pl. viii, fig. 1. (Rutiodon.)
Cope, E. D. 1866 D. (Rhytidodon=Belodon.)
 1869 M, pp. 25, 59. (Belodon.)
 1870 I, p. 444. (Belodon.)
 1871 M, p. 210. (Belodon.)
 1875 V, p. 34. (Belodon.)
 1877 E, p. 185. (Belodon.)
 Dana, J. D. 1896 A, p. 754, fig. 1183. (Belodon.)
 Emmons, E. 1856 A, p. 308 (Rutiodon, or Clepsisaurus, carolinensis); p. 318, figures (Paleosaurus sulcatus).
 1857 A, p. 82, figs. 52-56. (Rutiodon.)
 1858 A, p. 78. (Rutiodon.)
 1860 A, p. 175, figs. 157, 160¹. (Rutiodon.)
 Lea, I. 1856 B, p. 123. (Centemodon sulcatus.)
 1856 A, p. 78. (Centemodon sulcatus.)
 Leidy, J. 1856 L, p. 256. (Omosaurus perplexus.)
 1857 A, p. 272. (Omosaurus perplexus.)
 Marsh, O. C. 1896 B, p. 60. (Rhytidodon.)
 Wheatley, C. M. 1861 A, p. 44. (Centemodon sulcatus.)
 Triassic; North Carolina
- Phytosaurus leai (Emmons).**
Emmons, E. 1856 A, p. 299. (Clepsisaurus.)
Cope, E. D. 1869 M, p. 59. (Belodon.)
 1870 I, p. 444. (Belodon.)

- Cope, E. D.* 1871 M. ("Clepsysaurus.")
 1875 V, p. 35. (Belodon.)
Emmons, E. 1857 A, p. 79, text fig. 51; pl. x. (Clepsisaurus.)
 Triassic; North Carolina.
- Phytosaurus lepturus (Cope).**
Cope, E. D. 1869 M, p. 59, pl. xiv, figs. 1-14. (Belodon.)
 1870 I, p. 444.
 1870 S, p. 563.
 Triassic; Pennsylvania.
- Phytosaurus priscus (Leidy).**
Leidy, J. 1856 J, p. 165. (Composaurus.)
 Dana, J. D. 1896 A, p. 754, fig. 1182. (Belodon.)
Cope, E. D. 1869 M, p. 59, pl. xiv, figs. 15-25. (Belodon.)
 1870 I, p. 444. (Belodon.)
 1871 M, p. 210. (Belodon.)
 1875 V, p. 34, pl. viii, fig. 5. (Belodon.)
 1877 E, p. 185. (Belodon.)
Emmons, E. 1856 A, p. 299 (Clepsisaurus pennsylvanicus, in part); p. 318, figures (Palæosaurus carolinensis).
 1857 A, pp. 65-79, figs. 37-50 (Clepsisaurus pennsylvanicus, in part); p. 86, figs. 57, 58, 60 (Palæosaurus carolinensis).
 Hills, R. C. 1880 A. (Belodon.)
 Leidy, J. 1856 L, p. 255. (Palæosaurus.)
 1857 A, p. 271. (Palæosaurus.)
 Triassic; North Carolina.
- Phytosaurus rostratus (Marsh).**
Marsh, O. C. 1896 B, p. 61, fig. 2. (Rhytidodon.)
 1900 A, p. 23. (Rhytidodon.)
 Triassic; North Carolina.
- Phytosaurus scolopax (Cope).**
Cope, E. D. 1881 W, p. 923. (Belodon.)
 1887 A, p. 221. (Belodon.)
 Triassic; New Mexico.
- Phytosaurus serridens (Leidy).**
Leidy, J. 1859 E. (Eurydorus.)
Cope, E. D. 1866 D, p. 249. (Belodon.)
 1869 M, pp. 57, 58. (Belodon.)
 Wheatley, C. M. 1861 A, p. 44. (Eurydorus.)
 Triassic; Pennsylvania.
- Phytosaurus superciliosus (Cope).**
Cope, E. D. 1893 A, p. 12, pl. i, figs. 1-10. (Belodon.)
 Triassic; Texas.
- Phytosaurus validus (Marsh).**
Marsh, O. C. 1893 G, p. 170. (Belodon. No description.)
 1896 B, p. 59. (No description.)
 Triassic; Connecticut.

EPISCOPOSAURUS Cope. Type *E. horridus* Cope.

Cope, *E. D.* 1887 A, p. 213.

1896 I, p. 123.

Marsh, O. C. 1896 B, p. 62.

Nicholson and Lydekker 1889 A, p. 1184.

Zittel, K. A. 1890 A, p. 644.

Episcoposaurus haplocerus Cope.

Cope, *E. D.* 1892 J, p. 129.

Cope, *E. D.* 1892 E, p. 257.

Triassic; Texas.

Episcoposaurus horridus Cope.

Cope, *E. D.* 1887 A, p. 213.

1892 E, p. 257.

Triassic; New Mexico.

Suborder AËTOSAURIA Nich. and Lydek.

Nicholson and Lydekker 1889 A, p. 1182.

Baur, G. 1894 A, p. 323.

Cope, *E. D.* 1898 B, p. 73. (Pseudosuchia.)

Fraas, O. 1867 A. (Genus *Dyoplax*.)

Fürbringer, M. 1900 A, p. 305. (Pseudosuchia.)

Gadow, H. 1898 A, p. 19. (Pseudosuchia.)

Haeckel, E. 1895 A, p. 364.

Marsh, O. C. 1895 C, p. 484.

Zittel, K. A. 1890 A, p. 644. (Pseudosuchia.)

AËTOSAURIDÆ.

Baur, J. 1887 C, p. 102. (Aethosauridæ.)

| Nicholson and Lydekker 1889 A, p. 1182.

Typothorax Cope. Type *T. coccinarum* Cope.

Cope, *E. D.* 1875 R, p. 265.

1875 F, p. 84.

1877 K, p. 29.

1887 A, p. 210.

1887 E.

1896 I, p. 123.

Marsh, O. C. 1896 B, p. 62.

Nicholson and Lydekker 1889 A, pp. 1137, 1183.

Steinmann and Döderlein 1890 A, p. 653.

Zittel, K. A. 1890 A, p. 644.

Typothorax coccinarum Cope.

Cope, *E. D.* 1875 R, p. 265. (In part.)

1875 A.

1875 F, p. 84.

1877 K, p. 30, pl. xxii, figs. 1-9.

1887 A, p. 210, pl. i.

1887 E.

1896 I, p. 123.

Triassic; New Mexico.

Stegomus Marsh. Type *S. arcuatus* Marsh.

Marsh, O. C. 1896 B, p. 59.

Cope, *E. D.* 1896 I, p. 123.

Regarded by Professor Marsh as belonging to the *Parasuchia*.

Stegomus arcuatus Marsh.

Marsh, O. C. 1896 B, p. 60, pl. i.

Triassic; Connecticut.

Suborder EUSUCHIA Huxley.

Huxley, T. H. 1875 B.

Cope, *E. D.* 1871 B, p. 235. (Procellia.)

1889 R, p. 864.

1891 N, p. 45.

1898 B, p. 73.

1900 A, p. 161.

Deslongchamps-Eudes, J. A. 1864 A. ("Téléosau-riens.")

Fürbringer, M. 1900 A, p. 306.

Gadow, H. 1896 A, p. 38. (Crocodilia.)

1898 A, p. 19.

Haeckel, E. 1895 A, pp. 364, 367. (Typosuchia.)

Lydekker, R. 1888 B, p. 43.

Nicholson and Lydekker 1889 A, p. 1185.

Owen, R. 1860 A, p. 165. (Procellia.)

Parker, W. K. 1868 A, p. 126. (Crocodilia.)

Woodward, A. S. 1898 B, p. 223.

Zittel, K. A. 1890 A, p. 647.

CROCODYLIDÆ.

Gray, J. E., 1825, *Annals Philos.* (2), x, p. 195. (Crocodilidæ.)

The usual way of spelling this name is *Crocodylidæ*.

Bemmelen, J. F. 1896 A, p. 332.

Boulenger, G. A. 1889 A, p. 274.

Calori, L. 1894 A.

Cope, *E. D.* 1871 B.

1900 A, p. 161.

Deslongchamps-Eudes, J. A. 1864, A. ("Crocodi-liens.")

Gaupp, E. 1895 B.

Gegenbaur, C. 1898 A.

Hoffmann, C. K. 1890 B.

Huxley, T. H. 1859 B, p. 5 (Crocodilidæ); p. 2 (Alligatoridæ).

1872 A, p. 221. (Alligatoridæ, Crocodilidæ.)

Lydekker, R. 1888 B, p. 44.

Nicholson and Lydekker 1889 A, p. 1192.

Röse, C. 1892 C.

Steinmann and Döderlein 1890 A, p. 657.

Zittel, K. A. 1890 A, p. 681 (Crocodilidæ); p. 679 (Alligatoridæ).

CROCODYLUS Laurenti. Type *C. niloticus* Linn.

Laurenti, J. N. 1768, Synop. Rept., p. 53.

The name of this genus is usually spelled *Crocodylus*. The above form is the original one.

Boulenger, G. A. 1889 A, p. 277.

1896 B.

Cope, E. D. 1867 C, p. 143. (*Thecachampsa*, type *T. contusor*.)

1869 G, p. 11. (*Thecachampsa*.)

1869 M, pp. 62, 231. (*Thecachampsa*.)

1870 D, p. 174. (*Thecachampsa*.)

1872 V, p. 554. (*Ichthyosuchus*.)

1875 C, p. 31.

1882 J, p. 983. (*Crocodylus*, *Thecachampsa*.)

1884 O, p. 151.

1900 A, p. 171.

Cuvier, G. 1834 A, ix, pp. 25-344, with plates.

Gegenbaur, C. 1898 A.

Giebel, C. G. 1877 A, p. 105.

Hoffmann, C. K. 1890 B.

Huxley, T. H. 1859 B, p. 6.

1869 B.

1872 A, p. 217.

1875 B.

Klein, E. F. 1863 A.

Kükenthal, W. 1893 A.

Leidy, J. 1871 C, p. 368.

1872 B, p. 366.

Ludwig, R. 1877 A.

Lydekker, R. 1888 B, p. 53.

Marsh, O. C. 1870 C, p. 98. (*Thecachampsa*; not tenable.)

Miall, L. C. 1878 C.

Nicholson and Lydekker 1889 A, p. 1194 (*Thecachampsa*); p. 1195 (*Crocodylus*).

Owen, R. 1847 B, p. 283.

1850 B, p. 521.

1866 A.

Parker, W. K. 1883 A.

Segond, L. A. 1873 A, p. 10. ("Crocodile.")

Steinmann and Döderlein 1890 A, p. 657.

Toula and Kail 1885 A.

Woodward, A. S. 1886 D.

Zittel, K. A. 1890 A, p. 682 (*Crocodylus*); p. 683 (*Thecachampsa*).

Crocodylus acer Cope.

Cope, E. D. 1882 J, pp. 982, 986, fig. 2.

1884 O, pp. 152, 154, pl. xxiii, figs. 1, 2.

Zittel, K. A. 1890 A, p. 682, fig. 604.

Eocene (Manti beds); Utah.

Crocodylus affinis Marsh.

Marsh, O. C. 1871 B, p. 454.

Cope, E. D. 1882 J, p. 984, fig. 4; p. 986.

1884 O, pp. 152, 162, pl. xxi, figs. 1-3.

Leidy, J. 1872 B, p. 366.

Eocene (Bridger); Wyoming.

Crocodylus antiquus Leidy.

Leidy, J. 1852 K, pl. xvi. (*Crocodylus*.)

Cope, E. D. 1867 C, p. 143. (*Thecachampsa contusor*.)

1869 G, p. 12. (*Thecachampsa*.)

1869 M, p. 64, fig. 16. (*Thecachampsa*.)

1882 J, p. 983.

Emmons, E. 1858 B, p. 215, fig. 35 A.
Eocene; Virginia.

Crocodylus aptus Leidy.

Leidy, J. 1869 B, p. 67.

Cope, E. D. 1844 O, p. 162.

Leidy, J. 1871 C, p. 368.

1872 B, p. 366.

1873 B, p. 126, pl. viii, fig. 2.

Eocene (Wasatch?); Wyoming.

Crocodylus brevicollis Marsh.

Marsh, O. C. 1871 B, p. 456.

King, C. 1878 A, p. 405.

Eocene (Bridger); Wyoming.

Crocodylus chamensis Cope.

Cope, E. D. 1874 O, p. 15. (*Alligator*.)

1875 C, p. 33. (*C. heterodon*, in part.)

1877 K, p. 67, pl. xxxii, figs. 1-22.

1884 O, p. 166.

Eocene (Wasatch); New Mexico.

Crocodylus clavis Cope.

Cope, E. D. 1872 R, p. 485.

1873 E, p. 612.

1882 J, p. 983, fig. 5; p. 986.

1884 O, pp. 152, 157, pl. xxi, figs. 4-9; pl. xxii.

Osborn, Scott, and Speir 1878 A, p. 93.

Eocene (Bridger); Wyoming.

Crocodylus elliotti Leidy.

Leidy, J. 1870 N.

Cope, E. D. 1873 E, p. 612.

1875 C, p. 33.

1877 K, p. 65, pl. xxxi, figs. 6-17.

1882 J, pp. 983, 986.

1884 O, p. 152. (*Thecachampsa*.)

King, C. 1878 A, p. 405.

Leidy, J. 1870 R.

1871 C, p. 368.

1872 B, p. 366.

1873 B, p. 126, pl. viii, figs. 4-8.

Marsh, O. C. 1871 B, p. 454.

Osborn, Scott, and Speir 1878 A, p. 85.

Zittel, K. A. 1890 A, p. 683. (*Thecachampsa*.)

Eocene (Bridger); Wyoming, New Mexico.

Crocodylus fastigiatus Leidy.

Leidy, J. 1851 G, p. 327.

Cope, E. D. 1869 M, p. 65. (*Thecachampsa*.)

1882 J, p. 986.

Eocene; Virginia.

Crocodylus grinnellii Marsh.

Marsh, O. C. 1871 B, p. 455.

Cope, E. D. 1873 E, p. 613.

Leidy, J. 1872 B, p. 366.

Marsh, O. C. 1871 G, p. 105.

Eocene (Bridger); Wyoming.

Crocodylus grypus Cope.

Cope, E. D. 1875 C, p. 32.

1877 K, p. 63, pl. xxx.

1882 J, p. 983.

King, C. 1878 A, p. 377.

Eocene (Bridger?); New Mexico,

Crocodylus heterodon Cope.

- Cope, E. D.* 1872 T, p. 544. (Alligator.)
 1873 E, p. 614. (Alligator.)
 1875 C, p. 34.
 1882 J, pp. 983, 986.
 1884 O, p. 164, pl. xxiii a, figs. 10-18.
King, C. 1878 A, p. 376 (Alligator); p. 377 (Crocodylus).
Osborn, Scott, and Speir 1878 A, p. 93.
 Eocene (Wasatch); Wyoming.

Crocodylus humilis Leidy.

- Leidy, J.* 1856 F, p. 73.
Cope, E. D. 1869 M, p. 82.
 1874 C, p. 27. (Bottosaurus?)
 1875 E, p. 254. (Bottosaurus?)
 1877 G, p. 573.
Leidy, J. 1856 C, p. 120.
 1860 A, p. 146, pl. xi, figs. 9-19.
Marsh, O. C. 1897 C, p. 527.
 Cretaceous (Laramie); Montana, Colorado.

Crocodylus liodon Marsh.

- Marsh, O. C.* 1871 B, p. 454.
Cope, E. D. 1873 E, p. 613.
 1875 C, p. 33.
 1877 K, p. 67, pl. xxi, figs. 18-23. (C. liodon?)
 1884 O, p. 153.
Leidy, J. 1872 B.
Marsh, O. C. 1871 G, p. 104.
 Eocene; Wyoming, New Mexico.

Crocodylus marylandicus Clark

- Clark, W. B.* 1895 A, p. 4.
 1897 A, p. 58, pl. viii, fig. 1.
 Eocene; Maryland.

Crocodylus parvus Osb., Scott, and Speir.

- Osborn, Scott, and Speir* 1878 A, p. 91.
 Eocene (Bridger); Wyoming.

Crocodylus polyodon Cope.

- Cope, E. D.* 1873 E, p. 614. (Diplocynodus.)
 1882 J, p. 981.
 1884 O, p. 154, pl. xxiii a, figs. 1, 2.
 Eocene (Bridger); Wyoming.

Crocodylus rugosus (Emmons).

- Emmons, E.* 1858 B, p. 219, figs. 38, 39. (Polyptychodon.)
Cope, E. D. 1871 M, p. 219. (Thecachampsia.)
 1875 V, p. 33, pl. viii, fig. 3. (Thecachampsia.)
Emmons, E. 1860 A, p. 238, fig. 1807. (Polyptychodon.)
Leidy, J. 1865 A, pp. 18, 116. (Polyptychodon.)
 Eocene; North Carolina.

The following references are given to notices of undetermined and undescribed remains of *Crocodylus*:

- Cope, E. D.* 1881 D, p. 184. Eocene; Wyoming.
 1882 E, p. 143. Eocene.
Leidy, J. 1865 A, p. 116. Eocene; New Jersey, North Carolina.

Crocodylus sericodon Cope.

- Cope, E. D.* 1867 C, p. 143. (Thecachampsia.)
 1869 B, p. 738. (Thecachampsia.)
 1869 G, p. 12. (Thecachampsia.)
 1869 K, p. 91. (Thecachampsia.)
 1869 M, p. 64, pl. v, figs. 7, 8. (Thecachampsia.)
 1875 H, p. 363. (Thecachampsia.)
 1882 J, p. 984.
 Miocene; Maryland, New Jersey.

Crocodylus serratus Cope.

- Cope, E. D.* 1872 Y, p. 171. (Thecachampsia.)
 1882 J, p. 986.
 Eocene; New Jersey.

Crocodylus sicarius Cope.

- Cope, E. D.* 1869 G, p. 12. (Thecachampsia.)
 1869 K, p. 91. (Thecachampsia.)
 1869 M, p. 63, pl. v, fig. 6. (Thecachampsia.)
 1882 J, p. 984.
 Miocene; Maryland.

Crocodylus solaris Marsh.

- Marsh, O. C.* 1877 D, p. 254.
 Pliocene?; South Dakota.

Crocodylus squankensis Marsh.

- Marsh, O. C.* 1869 A, p. 391. (Thecachampsia.)
Cope, E. D. 1871 C, p. 65. (Thecachampsia.)
 1872 Y, p. 17. (Thecachampsia.)
 1882 J, p. 983.
Marsh, O. C. 1870 C, p. 98. (Thecachampsia.)
 Eocene; New Jersey.

Crocodylus stavelianus Cope.

- Cope, E. D.* 1885 Q.
 Eocene (Puerco); New Mexico.

Crocodylus subulatus Cope.

- Cope, E. D.* 1872 V, p. 554. [Crocodylus (Ichthyosuchus).]
 1873 E, p. 613. (Diplocynodus.)
 1877 K, p. 60. (Diplocynodus.)
 1882 J, pp. 983, 986.
 1884 O, p. 152, pl. xxiii a, figs. 4-9.
 Eocene (Bridger); Wyoming.

Crocodylus sulciferus Cope.

- Cope, E. D.* 1872 V, p. 555.
 1873 E, p. 612.
 1882 J, p. 983.
 1884 O, p. 157, pl. xxiii a, fig. 23.
 Eocene (Bridger); Wyoming.

Crocodylus wheelerii Cope.

- Cope, E. D.* 1875 C, p. 33.
 1875 F, p. 95. (C. veelerii.)
 1877 K, p. 64, pl. xxxi, figs. 1-5
 1882 J, p. 983.
 Eocene; New Mexico.

- Wyman, J.* 1850 B, p. 233, fig. 8. Eocene; South Carolina.

LIMNOSAURUS Marsh. Type *Crocodylus ziphodon* Marsh.

Marsh, O. C. 1872 K, p. 309.

Limnosaurus ziphodon Marsh.

Marsh, O. C. 1871 G, p. 104. (Crocodylus.)

Cope E. D. 1882 J, p. 986. (Crocodylus ziphodon.)

King, C. 1878 A, p. 406.

Leidy, J. 1872 B, p. 366. (Crocodylus.)

Marsh, O. C. 1871 B, p. 453. (Crocodylus.)

1872 K, p. 309.

Eocene; Wyoming.

POLYDECTES Cope. Type *P. biturgidus* Cope.

Cope, E. D. 1869 I.

1870 D, p. 271.

1875 V, p. 33.

Polydectes biturgidus Cope.

Cope, E. D. 1869 I.

1870 D, p. 271.

1875 V, p. 33, pl. viii, fig. 2.

Cretaceous?; North Carolina.

ALLIGATOR Cuvier. Type *A. lucius* Cuvier = *Crocodylus mississippiensis* Daudin.

Cuvier, G., 1807, Ann. Mus., x, p. 30.

Boulenger, G. A. 1889 A, p. 289.

1896 B.

Clarke, S. F. 1891 A.

Cope, E. D. 1873 E, p. 614.

1900 A, pp. 161, 164.

Hoffmann, C. K. 1890 B.

Huxley, T. H. 1859 A, p. 3.

Ludwig, R. 1877 A.

Lydekker, R. 1889 B, p. 44.

Nicholson and Lydekker 1889 A, p. 1196.

Alligator mississippiensis Daudin.

Daudin, F. M., 1802, Hist. Nat. Rept., ii, p. 412.

(Crocodylus.)

Boulenger, G. A. 1889 A, p. 290.

Leidy, J. 1860 B, p. 122, pl. xxvii, figs. 6, 7.

1889 E, p. 31.

1892 A.

Recent and in Peace Creek beds; Florida:
Pleistocene; South Carolina.

BOTTOSAURUS Agassiz. Type *Crocodylus macrorhynchus* Harlan = *Bottosaurus harlani* Meyer.

Agassiz, L., 1849, Proc. Acad. Nat. Sci. Phila., iv, p. 169.

Cope, E. D. 1869 K, p. 90.

1869 M, pp. 62, 65.

Leidy, J. 1865 A, p. 12.

Zittel, K. A. 1890 A, p. 679.

Harlan, R. 1835 B, p. 280. (C. macrorhynchus.)

1835 I, p. 380, with plate. (C. macrorhynchus.)

Leidy, J. 1865 A, pp. 12, 115, pl. iv, figs. 19-21; pl. xvii, figs. 11-14. (B. harlani, in part.)

1865 D, p. 67. (B. harlani.)

Cretaceous; New Jersey.

Bottosaurus harlani (Meyer).

Meyer, H., 1832, Palæologica, p. 108. (Crocodylus.)

Cope, E. D. 1867 E, p. 26.

1869 B, p. 736.

1869 M, pp. 65, 231. (In part.)

1871 G, p. 48. (B. macrorhynchus.)

1875 E, p. 258. (B. macrorhynchus.)

1875 V, p. 48. (B. macrorhynchus.)

De Kay, J. E. 1842 A, p. 27. (Crocodylus macrorhynchus.)

Gibbes, R. W. 1851 A, p. 7. (C. macrorhynchus.)

Giebel, C. G. 1847 B, p. 122. (C. macrorhynchus.)

Harlan, R. 1824 B, pl. i ("Crocodylus").

1834 B, p. 76. (C. macrorhynchus.)

Bottosaurus perrugosus Cope.

Cope, E. D. 1874 C, p. 26.

1874 B, p. 452.

1875 E, pp. 68, 253, pl. vi, figs. 5-8.

Lambe, L. M. 1899 A, p. 69. (Identification doubtful.)

Cretaceous; Colorado, British America?.

Bottosaurus tuberculatus Cope.

Cope, E. D. 1869 M, p. 230.

1869 M, p. 65. (B. harlani, in part.)

1871 G, p. 48.

Cretaceous; New Jersey.

DIPLOCYNODON Pomel. Type *D. rateii* Pomel.

Pomel, A. 1847 C, p. 383.

Cope, E. D. 1869 M, p. 62. (Plerodon.)

1877 K, p. 60. (Diplocynodus.)

1882 J, p. 986. (Plerodon.)

Lydekker, R. 1886 E, p. 211. (Plerodon.)

1888 B, p. 45.

Meyer, H., 1839, Neues Jahrb. Mineral., p. 77. (Plerodon.)

1857, Neues Jahrb. Mineral., p. 538. (Pleurodon.)

Nicholson and Lydekker 1889 A, p. 1195.

Zittel, K. A. 1890 A, p. 679.

Diplocynodon sphenops (Cope).

Cope, E. D. 1875 C, p. 31. (Diplocynodus.)

1877 K, p. 60, pl. xxix. (Diplocynodus.)

1882 J, p. 986. (Plerodon.)

King, C. 1878 A, p. 377. (Diplocynodus.)

Eocene; New Mexico.

GAVIALIDÆ.

Huxley, T. H. 1859 B.

Boulenger, G. A. 1889 A, p. 274. (Crocodilidæ, in part.)

Huxley, T. H. 1872 A, p. 222.

Zittel, K. A. 1890 A, p. 674 (Gavialidæ); p. 672 (Rhynchosuchidæ).

GAVIALIS Oppel. Type *G. gangeticus* Linn.

Oppel, M., 1811, Ordnungen der Reptilien, p. 19.

Boulenger, G. A. 1889 A, p. 275.

Cope, E. D. 1900 A, p. 162.

Lydekker, R. 1888 B, p. 65. (Garialis.)

Owen, R. 1850 B, p. 521.

Toula and Kail, 1885 A.

Zittel, K. A. 1890 A, p. 674.

Cope, E. D. 1869 B, p. 736. (Hyposaurus; no description.)

1875 E, p. 254.

1875 K.

Cretaceous; New Jersey.

Gavialis minor Marsh.

Marsh, O. C. 1870 C.

Cope, E. D. 1872 Y, p. 18. (Thecachampsæ?)

Eocene; New Jersey.

Gavialis fraterculus Cope.

Cope, E. D. 1869 M, p. 82. (Hyposaurus.)

HETERODONTOSUCHUS Lucas. Type *H. ganei* Lucas.

Lucas, F. A. 1898 A.

Heterodontosuchus ganei Lucas.

Lucas, F. A. 1898 A.

Triassic; Utah.

THORACOSAURUS Leidy. Type *T. grandis* Leidy = *Gavialis neocæsariensis* De Kay.

Leidy, J. 1852 B.

Agassiz, L. 1849 A. (Sphenosaurus, type *Crocodylus clavirostris*; not of Meyer, 1847.)

Cope, E. D. 1869 M, p. 79.

1900 A, p. 161.

Gibbes, R. W. 1851 A, pp. 7, 13.

Koken, E. 1888 B.

Leidy, J. 1865 A, p. 5.

Nicholson and Lydekker 1889 A, p. 1193.

Steinmann and Döderlein 1890 A, p. 657. (Thoracosuchus.)

Zittel, K. A. 1890 A, p. 672.

Thoracosaurus neocæsariensis (De Kay).

De Kay, J. E. 1842 A, p. 28, pl. xxii, fig. 59. (Gavialis.)

Agassiz, L. 1849 A. (Sphenosaurus clavirostris.)

Cope, E. D. 1867 E, p. 26. (T. neocæsariensis.)

1869 B, p. 736. (T. neocæsariensis.)

1869 M, pp. 68, 79. (T. neocæsariensis.)

1875 E, p. 250. (T. neocæsariensis.)

De Kay, J. E. 1833 A, pl. iii, figs. 7-11. ("Gavial.")

Gibbes, R. W. 1850 A. (Sphenosaurus clavirostris.)

1851 A, p. 7 (Croc. clavirostris); p. 13

(Croc. basifissus.)

Giebel, C. G. 1847 B, p. 122. (Croc. clavirostris.)

Koken, E. 1888 B, p. 757.

Leidy, J. 1852 B. (Thoracosaurus grandis.)

1852 K, p. 135. (Croc. dekayi, C. basifissus.)

1865 A, pp. 5, 115, pl. i, figs. 1-6; pl. ii, figs.

1-3; pl. iii, figs. 5-11.

1865 D, p. 67.

Morton, S. G. 1844 A. [Crocodilus (Gavialis?) clavirostris.]

1845 A. (Croc. clavirostris.)

Owen R. 1849 A, p. 381, pl. x, figs. 1, 2. (Croc. basifissus.)

1860 A, p. 165. (Croc. basifissus.)

Woodward, A. S. 1890 A, p. 393.

Zittel, K. A. 1890 A, p. 673.

Cretaceous; New Jersey.

HOLOPS Cope. Type *H. brevispinis* Cope.

Cope, E. D. 1869 H, p. 123.

1869 M, pp. 62, 67, 231.

1900 A, p. 162.

Huxley, T. H. 1875 B.

Lydekker, R. 1886 E, p. 211.

Nicholson and Lydekker 1889 A, p. 1193.

Zittel, K. A. 1890 A, p. 673.

Holops basitruncatus (Owen).

Owen, R. 1849 A, p. 381, pl. x, figs. 3, 4. (Crocodilus.)

Cope, E. D. 1869 B, p. 736. (Thoracosaurus tenebrosus.)

Cope, E. D. 1869 H, p. 123. (H. tenebrosus.)

1869 M, pp. 67, 77, fig. 19, p. 231, pl. iv, figs.

8, 9 (H. basitruncatus; called erroneously on plate Bottosaurus harlani); p. 78 (H. tenebrosus).

1875 E, p. 253.

Gibbes, R. W. 1851 A, p. 13. (Crocodilus.)

Leidy, J. 1852 K, p. 135. (Crocodilus.)

1865 A, p. 14 (syn. of Bottosaurus harlani);

p. 115, pl. iii, figs. 12-15 (Crocodilus tenebrosus).

Owen, R. 1860 A, p. 165. (Crocodilus.)

Eocene; New Jersey.

Holops brevispinis Cope.

- Cope, E. D.* 1869 H, p. 123.
 1869 B, p. 736. (Thoracosaurus; no description.)
 1869 M, p. 69, pl. i, fig. 13; pl. iv, figs. 4-6.
 1875 E, p. 252.
 Cretaceous; New Jersey.

Holops cordatus Cope.

- Cope, E. D.* 1869 M, p. 73, fig. 18; pl. iv, fig. 1.
 1875 E, p. 253.
 Cretaceous; New Jersey.

Holops glyptodon Cope.

- Cope, E. D.* 1869 M, pp. 74, 231.
 1869 B, p. 736. (Thoracosaurus; no description.)
 1875 E, p. 253.
 Cretaceous; New Jersey.

Holops obscurus (Leidy).

- Leidy, J.* 1865 A, pp. 15, 16, 115, pl. ii, figs. 4, 5.
 (Crocodilus.)
Cope, E. D. 1867 E, p. 26. (Thoracosaurus.)
 1869 B, p. 736. (Thoracosaurus.)
 1869 H, p. 123.
 1869 M, pp. 68, 75, 231, pl. iv, figs. 1-3.
 1871 C, p. 75.
 1875 E, p. 253.
Leidy, J. 1865 A, pl. i, figs. 7-9.
Lydekker, R. 1886 E, p. 211.
 Cretaceous; New Jersey.

Holops pneumaticus Cope.

- Cope, E. D.* 1872 X.
 1875 E, p. 250.
 Cretaceous; New Jersey.

GONIOPHOLIDÆ.

- Lydekker, R.* 1888 B, p. 76. (Goniopholididæ.)
 1890 A, p. 229. (Goniopholididæ.)

- Nicholson and Lydekker 1889 A, p. 1189.
 Zittel, K. A. 1890 A, p. 676.

GONIOPHOLIS Owen. Type *G. crassidens* Owen.

- Owen, R.* 1842 A, p. 69.
Cope, E. D. 1878 H, p. 391. (Amphicotylus, type *A. lucasii*.)
Lydekker, R. 1888 B, p. 79.
 1890 A, p. 229.
Marsh, O. C. 1877 D, p. 254. (Diplosaurus, type *D. felix*.)
 1877 E. (Diplosaurus.)
 1896 B, p. 62. (Diplosaurus.)
Nicholson and Lydekker 1889 A, p. 1191.
Owen, R. 1878 A.
 1879 A.
Zittel, K. A. 1890 A, p. 676.

- Zittel, K. A.* 1890 A, p. 677. (Goniopholis.)
 Jurassic; Colorado.

Goniopholis lucasii Cope.

- Cope, E. D.* 1878 H, p. 391. (Amphicotylus.)
 1888 Y.
Zittel, K. A. 1890 A, p. 677.
 Jurassic; Colorado.

Goniopholis vebbii (Cope).

- Cope, E. D.* 1872 H, p. 310. (Hyposaurus.)
 1872 F, p. 327. (Hyposaurus vebbii.)
 1874 C, p. 26. (H. vebbii.)
 1875 E, pp. 52, 67, 250 (H. vebbii); pl. ix, figs. 8-8d (H. vebbii).
Marsh, O. C. 1877 D, p. 254. (Diplosaurus vebbii.)
Williston, S. W. 1898 D, p. 78. (Hyposaurus.)
Zittel, K. A. 1890 A, p. 677. (Goniopholis vebbii.)
 Cretaceous (Benton); Kansas.

Goniopholis felix (Marsh).

- Marsh, O. C.* 1877 D, p. 254. (Diplosaurus.)
King, C. 1878 A, p. 346. (Diplosaurus.)
Marsh, O. C. 1896 B, p. 61, fig. 2. (Diplosaurus.)
 1897 C, p. 507, fig. 62.

HYPOSAURUS Owen. Type *H. rogersii* Owen.

- Owen, R.* 1849 A, p. 383.
Cope, E. D. 1866 F, p. 111.
 1869 M, p. 80.
 1875 K.
Gibbes, R. W. 1851 A, p. 13.
Lydekker, R. 1888 B, p. 90.
Marsh, O. C. 1877 E.
Nicholson and Lydekker 1889 A, p. 1190.
Zittel, K. A. 1890 A, pp. 672, 676.

- Cope, E. D.* 1867 E, p. 26.
 1869 B, p. 736.
 1869 M, p. 80, pl. iv, figs. 10, 11.
 1875 E, p. 250.

pl. ii fig.

- Gibbes, R. W.* 1851 A, p. 9, pl. iii, fig. 13. (Holco-
 dus acutidens, New Jersey specimen, *vide* Leidy.)
Leidy, J. 1865 A, pp. 18, 116, pl. iii, figs. 4, 16-21:
 pl. iv, figs. 1-12.
 1865 D, p. 68.
Williston, S. W. 1894 B, p. 3, pl. i, figs. 4, 5. (Iden-
 tification doubtful.)
 1898 D, p. 76, figs. 3, 4. (Identification
 doubtful.)
 Cretaceous, New Jersey, Kansas.

Hyposaurus ferox Marsh.

- Marsh, O. C.* 1871 G, p. 104.
 Cretaceous; New Jersey.

Hyposaurus rogersii Owen.

- Owen, R.* 1849 A, p. 383, pl. xi, figs. 7-10.

PLIOGONODON Leidy. Type *P. priscus* Leidy.

Leidy, J. 1856 L, p. 255.
1857 A, p. 271.

Zittel, K. A. 1890 A, p. 620. (Syn.? of *Mosasaurus*.)
A genus of uncertain affinities.

Pliogonodon priscus Leidy.

Leidy, J. 1856 L, p. 255.

Cope, E. D. 1875, V, p. 33.
Emmons, E. 1858 B, p. 223, figs 43, 44. (*P. nobilis*.)
Leidy, J. 1857 A, p. 271.
1865 A, pp. 103, 119.
Miocene?; North Carolina.

Class AVES Linn.

Linnaeus, C., 1758, Syst. Nat., ed. x, p. 78
Ahlborn, F. 1896 A.

Baur, G. 1883 A.

1884 A.

1884 B.

1884 E.

1885 A.

1885 B.

1885 C.

1886 B.

1887 A.

Blanchard, É. 1859 A.

1860 A.

Burckhardt, R. 1895 A.

Calori, L. 1894 A.

Cope, E. D. 1869 M, pp. 4, 236.

1885 G.

1889 R, pp. 863, 869.

1891 N, p. 53.

1898 B, p. 83.

Coues, E. 1884 A.

Dames, W. 1884 A.

Dollo, L. 1883 B.

Edwards, A. M. 1863 A.

1869 A.

Fürbringer, M. 1885 A.

1888 A.

1889 A.

1890 A.

1892 A.

1896 A.

Gadow, H. 1888 A.

1889 A, p. 474.

1891 A.

1892 A.

1896 A, p. 42.

1896 B.

Gaupp, E. 1900 A.

Gegenbaur, C. 1864 A.

1865 A.

1898 A.

Giebel, C. G. 1866 A.

Haeckel, E. 1895 A, p. 400.

Hallmann, E. 1837 A, pp. 14, 32.

Hoffmann, C. K. 1879 A.

Humphrey, G. M. 1866 A.

Hurst, C. H. 1893 A.

Huxley, T. H. 1867 A.

1868 A.

1870 A.

1870 C.

1872 A, pp. 168, 233.

1876 B, xiii, pp. 468, 514.

Jeffries, J. A. 1881 A.

Jeffries, J. A. 1882 A.

Köstlin, O. 1844 A.

Leidy, J. 1871 C, p. 365.

Lucas, F. A. 1899 C, p. 323.

Lydekker, R. 1891 A.

Magnus, H. 1869 A.

Marsh, O. C. 1877 E.

Marshall, W. 1872 A.

Mehnert, E. 1887 A.

Morse, E. S. 1871 A.

1872 A.

1880 A.

Newton, A. 1868 A.

1875 A.

1896 A.

Nicholson and Lydekker 1889 A, p. 1208.

Osborn, H. F. 1900 G, p. 777.

Owen, R. 1864 C.

1866 B.

1873 C.

Parker, W. K. 1864 A.

1870 A.

1875 A.

1875 B.

1876 A.

1878 B.

1879 B, p. 81.

1884 A.

1887 A.

1889 A.

1891 A.

1891 B.

Paylow, A. 1885 A.

Schenk, F. 1897 A.

Segond, L. A. 1864 A.

1865 A.

Selenka, E. 1869 A.

Shufeldt, R. W. 1885 A.

1886 A.

1886 B.

1886 C.

1899 A, p. 101.

Steinmann and Döderlein 1890 A, p. 670.

Stejneger, L. 1885 A.

Vetter, B. 1885 A.

Wiedersheim, R. 1884 A.

Wildermuth, H. A. 1877 A.

Woodward, A. S. 1898 B, p. 231.

Woodward, H. 1874 A.

1874 B.

1885 C.

1886 C.

Zittel, K. A. 1890 A, pp. 804, 857.

Subclass SAURURÆ Haeckel.

Cope, E. D. 1889 R, p. 869.

1898 B, p. 83.

Fürbringer, M. 1888 A, p. 1519.

Gadow, H. 1892 A, p. 236. (Archornithes.)

1898 A, p. 30. (Archæornithes.)

Haeckel, E. 1895 A, pp. 402, 409.

Huxley, T. H. 1867 A, p. 418.

1872 A, p. 233.

Menzbier, M. 1887 A.

Nicholson and Lydekker 1889 A, p. 1221.

Parker, W. K. 1875 A.

Pavlov, A. 1885 A, p. 113.

Stejneger, L. 1885 A, p. 21.

Woodward, A. S. 1898 B, p. 232. (Subclass Archæornithes; order Saururæ.)

Woodward, H. 1886 C, p. 370.

Zittel, K. A. 1890 A, p. 820.

Order ORNITHOPAPPI Stejneger.

Stejneger, L. 1885 A, p. 21.

Cope, E. D. 1889 R, p. 869.

Cope, E. D. 1898 B, p. 84.

Haeckel, E. 1895 A, p. 410. (Archæornithes.)

ARCHÆOPTERYGIDÆ.

Cope, E. D. 1898 B, p. 84.

Fürbringer, M. 1888 A, p. 1519.

Huxley, T. H. 1872 A, p. 233.

Nicholson and Lydekker 1889 A, p. 1221.

ARCHÆOPTERYX Meyer.

Meyer, H., 1861, Neues Jahrb. Mineral., p. 679.

Although no species of this genus has been found in North America, the following citations of the literature are given on account of the important information furnished by the genus.

Baur, G. 1884 B, p. 451.

1886 D.

Branco, W. 1885 A.

Dames, W. 1882 A.

1884 A.

1884 B.

1897 A, p. 818.

Edwards, A. M. 1863 A.

1869 A, p. 673.

Fraas, E. 1885 A.

Fürbringer, M. 1888 A, p. 1522.

Gadow, H. 1888 A, p. 166.

1891 A.

1892 A, p. 236.

Gaupp, E. 1894 A.

Haeckel, E. 1895 A, p. 412.

Hurst, C. H. 1893 A.

1895 A.

Huxley, T. H. 1868 A, p. 361.

Marsh, O. C. 1882 C.

Meyer, H., 1861, Palæontographica, i, p. 53.

Newton, A. 1875 A, p. 728.

Nicholson and Lydekker 1889 A, p. 1221.

Owen, R. 1864 C.

Parker, W. K. 1868 A, p. 142.

1875 A.

Pavlov, A. 1885 A.

Pycraft, W. P. 1894 A.

1896 A.

Selenka, E. 1869 A, pl. iii, figs. 4, 5.

Steinmann and Döderlein 1890 A, p. 668.

Stejneger, L. 1885 A, p. 21.

Vetter, B. 1885 A.

Vogt, C. 1880 A.

Wagner, A. 1861 A.

Wiedersheim, R. 1884 A, p. 659.

Woodward, A. S. 1898 B, p. 232, figs. 141, 142.

Woodward, H. 1874 B.

1884 A.

1885 C, p. 311.

1886 C, p. 359, figs. 5, 20.

Zittel, K. A. 1890 A, p. 820.

LAOPTERYX Marsh. Type *L. priscus* Marsh.*Marsh, O. C.* 1881 C, p. 341.

Fürbringer, M. 1888 A, p. 1478.

Marsh, O. C. 1882 C.

Menzbier, M. 1887 A, p. 581.

Nicholson and Lydekker 1889 A, p. 1229.

Pavlov, A. 1885 A, p. 107.

Stejneger, L. 1885 A, p. 23.

Zittel, K. A. 1890 A, p. 824.

The true position of this genus is problematical.

Laopteryx priscus Marsh.*Marsh, O. C.* 1881 C, p. 341.

Coues, E. 1884 A, p. 829.

Fürbringer, M. 1888 A.

Marsh, O. C. 1897 C, p. 508.

Stejneger, L. 1885 A, p. 23.

Jurassic; Wyoming.

Subclass EURHIPIDURA Gill.

Gill, T., 1874, Baird, Brewer, and Ridgway's Land Birds, i, Introd., p. xiii.
Cope, E. D. 1889 R, p. 869.
1891 N, p. 54.
Cope, E. D. 1898 B, p. 84.

Gadow, H. 1898 A, p. 30. (Neornithes.)
Haeckel, E. 1895 A, p. 402. (Ornithuræ.)
Stejneger, L. 1885 A, p. 31.
Woodward, A. S. 1898 B, p. 294.

Superorder ODONTOTORMÆ Marsh.

Marsh, O. C. 1875 E, p. 630.
Cope, E. D. 1889 R, p. 869.
1891 N, p. 55.
1898 B, p. 84.
Fürbringer, M. 1888 A, p. 1421.
1892 B.
Grinnell, G. B. 1881 A, p. 258.
Lydekker, R. 1891 A, p. 200.
1896 A, p. 649.
Marsh, O. C. 1873 C. (<Odontornithes.)
1875 D, p. 407. (Ichthyornithes.)
1876 F, p. 511.
1876 G, p. 59.
1877 E. (<Odontornithes.)

Marsh, O. C. 1880 G, p. 119.
1882 C. (<Odontornithes.)
1883 C, p. 86.
Menzbier, M. 1887 A.
Nicholson and Lydekker 1889 A, p. 1231.
Owen, R. 1873 A, p. 370. (<Odontornithes.)
Pavlow, A. 1885 A, p. 113.
Steinmann and Döderlein 1890 A, p. 673. (Odontormæ.)
Stejneger, L. 1885 A, p. 23.
Woodward, A. S. 1898 B, p. 242.
Woodward, H. 1886 C, p. 370. (<Odontornithes.)
Zittel, K. A. 1890 A, p. 834.

Order PTEROPAPPI Stejneger.

Stejneger, L. 1885 A, p. 23.
Cope, E. D. 1889 R, p. 870.
1891 N, p. 56.

Cope, E. D. 1898 B, p. 88.
Gadow, H. 1898 A, p. 31. (Ichthyornithes.)
Haeckel, E. 1895 A, p. 410. (Ichthyornithes.)

ICHTHYORNITHIDÆ.

Marsh, O. C. 1873 A.
Cope, E. D. 1898 B, p. 88.
Fürbringer, M. 1888 A, p. 1421.
1896 A, p. 497.

Lydekker, R. 1891 A, p. 201.
Marsh, O. C. 1873 C.
1875 E, p. 630.
Nicholson and Lydekker 1889 A, p. 1231.
Steinmann and Döderlein 1890 A, p. 673.

ICHTHYORNIS Marsh. Type *I. dispar* Marsh.

Marsh, O. C. 1872 Q.
Fürbringer, M. 1888 A.
1896 A, p. 499.
Grinnell, G. B. 1881 A, figs. 7, 9.
Huxley, T. H. 1876 B, xiii, p. 515.
Lydekker, R. 1896 A, p. 649.
Marsh, O. C. 1872 P. (Colonosaurus, type *C. mudgei*.)
1873 C.
1875 E, p. 630.
1877 E.
1879 C.
1880 G.
1881 H.
1883 C.

Woodward, A. S. 1898 B, p. 242.
Woodward, H. 1886 C, p. 361.
Zittel, K. A. 1890 A, p. 834.

Ichthyornis agilis Marsh.

Marsh, O. C. 1873 D, p. 230. (Graculavus.)
Coues, E. 1884 A, p. 827.
Marsh, O. C. 1880 G, p. 197.
Williston, S. W. 1898 B, p. 46.
Cretaceous (Niobrara); Kansas.

Ichthyornis anceps Marsh.

Marsh, O. C. 1872 E, p. 364. (Graculavus.)
Cope, E. D. 1874 C, p. 17. (Graculavus.)
1875 E, p. 245. (Graculavus.)
Coues, E. 1872 B, p. 350. (Graculavus.)
1884 A, p. 827.
Marsh, O. C. 1873 D, p. 229. (Graculavus.)
1880 G, p. 198.
Williston, S. W. 1898 B, p. 47.
Cretaceous (Niobrara); Kansas.

Menzbier, M. 1887 A.
Nicholson and Lydekker 1889 A, pp. 1219, 1231.
Seeley, H. G. 1876 B.
Shufeldt, R. W. 1893 A.
Steinmann and Döderlein 1890 A, p. 673.
Stejneger, L. 1885 A, p. 26.
Thompson, D'A. W. 1890 B.

Ichthyornis dispar Marsh.

- Marsh, O. C.* 1872 Q.
Cope, E. D. 1874 C, p. 17.
 1875 E, p. 246.
Coues, E. 1872 B, p. 350.
 1884 A, p. 827.
Dana, J. D. 1896 A, p. 851, fig. 1431.
Marsh, O. C. 1872 P. (*Colonosaurus mudgei*.)
 1873 C.
 1873 D, p. 230.
 1875 D, p. 403, pl. ix.
 1875 E, p. 625, pl. ii.
 1880 G, p. 197, pls. xxi-xxvi.
 1883 C, p. 70, figs. 19, 21-24, 28, 29.
Nicholson and Lydekker 1889 A, p. 1231, fig. 1116.
Shufeldt, R. W. 1893 A.
Williston, S. W. 1897 H, p. 245.
 1898 B, p. 46, pl. vii, figs. 1, 2.
Woodward, H. 1874 B.
Zittel, K. A. 1890 A, p. 835, figs. 712, 713.
 Cretaceous (Niobrara); Kansas.

Ichthyornis lentus Marsh.

- Marsh, O. C.* 1877 D, p. 253. (*Graculavus*.)
Coues, E. 1884 A, p. 827.
Marsh, O. C. 1880 G, p. 198.
 Cretaceous (Niobrara); Kansas.

Ichthyornis tener Marsh.

- Marsh, O. C.* 1880 G, p. 198, pl. xxx, fig. 8.
Coues, E. 1884 A, p. 828.
Williston, S. W. 1898 B, p. 47.
 Cretaceous (Niobrara); Kansas.

Ichthyornis validus Marsh.

- Marsh, O. C.* 1880 G, p. 198, pl. xxx, figs. 11-14.
Coues, E. 1884 A, p. 828.
 Cretaceous (Niobrara); Kansas.

Ichthyornis victor Marsh.

- Marsh, O. C.* 1876 F, p. 511.
Coues, E. 1884 A, p. 828.
Dana, J. D. 1896 A, p. 851, fig. 1430.
Grinnell, G. B. 1881 A, figs. 7, 9.
Marsh, O. C. 1880 G, p. 199, pls. xxvii-xxxiv.
 1883 C, p. 74, figs. 25, 27, 30.
 1897 C, p. 527, pl. xxvi, fig. 1.
Shufeldt, R. W. 1893 A.
Stejneger, L. 1885 A, p. 25, fig. 9. (No specific name.)
Williston, S. W. 1898 B, p. 47.
Woodward, A. S. 1898 B, p. 243, fig. 145.
Zittel, K. A. 1890 A, p. 834, fig. 711.
 Cretaceous (Niobrara); Kansas.

APATORNITHIDÆ.

Fürbringer, M. 1888 A.

| Fürbringer, M. 1896 A, p. 497.

APATORNIS Marsh. Type *Ichthyornis celer* Marsh.

- Marsh, O. C.* 1873 C.
Fürbringer, M. 1888 A.
 1896 A, p. 497.
Grinnell, G. B. 1881 A.
Lydekker, R. 1896 A, p. 652.
Marsh, O. C. 1880 G, p. 141.
Nicholson and Lydekker 1889 A, p. 1231.
Zittel, K. A. 1890 A, p. 835.

Apatornis celer Marsh.

Marsh, O. C. 1873 A. (Ichthyornis.)

- Cope, E. D.* 1874 C, p. 17. (Ichthyornis.)
 1875 E, p. 246. (Ichthyornis.)
Coues, E. 1884 A, p. 826.
Marsh, O. C. 1873 C.
 1873 D, p. 230.
 1875 D, p. 404.
 1875 E, p. 626.
 1880 G, p. 192, pls. xxviii-xxxiii.
Williston, S. W. 1898 B, p. 47.
 Cretaceous (Niobrara); Kansas.

Superorder ODONTOLCÆ Marsh.

- Marsh, O. C.* 1875 D, p. 407.
Cope, E. D. 1889 R, p. 869.
 1891 N, p. 54.
 1898 B, p. 84.
Fürbringer, M. 1888 A.
 1892 B. (Odontholcæ.)
Gadow, H. 1898 A, p. 31.
Grinnell, G. B. 1881 A, p. 258.
Haeckel, E. 1895 A, p. 416, (Hesperornithes.)
Lydekker, R. 1891 A, p. 202.
 1896 A, p. 649.
Marsh, O. C. 1873 C. (<Odontornithes.)
 1875 D, p. 407.
 1875 E, p. 630.

- Marsh, O. C.* 1876 F. (<Odontornithes.)
 1876 G, p. 59.
 1877 B. (<Odontornithes.)
 1878 C, p. 409. (<Odontornithes.)
 1880 G, p. 5.
 1883 C, p. 86.
Menzies, M. 1887 A.
Nicholson and Lydekker 1889 A, p. 1224.
Pavlov, A. 1885 A, p. 113.
Steinmann and Döderlein 1890 A, p. 671.
Stejneger, L. 1885 A, p. 27. (Odontholcæ.)
Woodward, A. S. 1898 B, p. 234.
Wiedersheim, R. 1884 A, p. 664.
Zittel, K. A. 1890 A, p. 826.

Order DROMÆOPAPPI Stejneger.

Stejneger, L. 1885 A, p. 27.

Cope, E. D. 1889 R, 869.

Cope, E. D. 1898 B, p. 87.

Shufeldt, R. W. 1892 C. (Hesperornioidea.)

HESPERORNITHIDÆ.

Marsh, O. C. 1872 E, p. 363. (Hesperornidæ.)

Cope, E. D. 1883 DD.

1898 B, p. 87.

Fürbringer, M. 1888 A, p. 1476.

1890 B.

1896 A, p. 499.

Lydekker, R. 1891 A, p. 204.

Marsh, O. C. 1876 F, p. 509.

Shufeldt, R. W. 1892 C, p. 202.

Steinmann and Döderlein 1890 A, p. 671.

HESPERORNIS Marsh. Type *H. regalis* Marsh.

Marsh, O. C. 1872 E, p. 360.

Cope, E. D. 1883 DD.

Dollo, L. 1883 A, p. 16.

Fürbringer, M. 1888 A, p. 1476.

Grinnell, G. B. 1881 A.

Helm, F. 1891 A.

Huxley, T. H. 1876 B, xiii, p. 515.

Lydekker, R. 1891 A, p. 204.

1891 C.

1893 E, p. 140.

1896 A, p. 649.

Marsh, O. C. 1875 D.

1876 F, p. 509. (Lestornis, type *L. crassipes*.)

1877 B.

1877 E.

1879 C.

1880 G, p. 5.

1881 H.

1882 C.

1883 C, p. 52.

1897 A.

Menzbier, M. 1887 A.

Nicholson and Lydekker 1889 A, p. 1224.

Osborn, H. F. 1900 G, p. 783.

Seeley, H. G. 1876 B, p. 510.

Shufeldt, R. W. 1888 A, p. 17.

1890 A, p. 169.

1890 C.

1893 A, p. 336.

1897 B.

Stejneger, L. 1885 A, p. 25.

Thompson, D'A. W. 1890 B.

Vetter, B. 1885 A.

Wiedershiem, R. 1884 A, p. 664.

Williston, S. W. 1896 A, pl. ii.

1898 B, p. 47, pls. v-viii.

Woodward, A. S. 1898 B, p. 235.

Woodward, H. 1885 C, p. 312.

1886 C, p. 361, pl. i.

Zittel, K. A. 1890 A, p. 827.

Hesperornis crassipes Marsh.

Marsh O. C. 1876 F, p. 509. (Lestornis.)

Coues, E. 1884 A, p. 827.

Marsh, O. C. 1880 G, p. 196, pls. vii, xxvii, text fig. 40.

Nicholson and Lydekker 1889 A, p. 1225.

Stejneger, L. 1885 A, p. 30. (Lestornis.)

Thompson, D'A. W. 1890 B, p. 9.

Williston, S. W. 1898 B, p. 45.

Cretaceous (Niobrara); Kansas.

Hesperornis gracilis Marsh.

Marsh, O. C. 1876 F, p. 510.

Coues, E. 1884 A, p. 82.

Marsh, O. C. 1880 G, p. 197.

Williston, S. W. 1898 B, p. 46.

Cretaceous (Niobrara); Kansas.

Hesperornis regalis Marsh.

Marsh, O. C. 1872 A.

Cope, E. D. 1874 C, p. 17.

1875 E, p. 245.

Coues, E. 1872 B, p. 350.

1884 A, p. 826.

Dana, J. D. 1896 A, p. 850, figs. 1423-1429.

Grinnell, G. B. 1881 A, figs. 1, 3, 5, 6.

Huxley, T. H. 1876 C, p. 215.

Marsh, O. C. 1872 E, p. 360.

1873 D, p. 230.

1875 D, p. 404, pl. x.

1877 B, pl. v.

1880 G, p. 195, pls. i-vi; viii-xvi; xviii-xx; text figs. 1, 4-6, 8-14, 21-27, 35, 36.

1883 C, p. 52, figs. 3-5, 7, 9-14, 17, 18.

1897 C, p. 527, pl. xxvi, fig. 2.

Nicholson and Lydekker 1889 A, p. 1225, figs. 1111-1113

Shufeldt, R. W. 1890 A, p. 169.

Stejneger, L. 1885 A, p. 27, figs. 13-16.

Thompson, D'A. W. 1890 B, figures.

Wiedersheim, R. 1884 A, p. 663.

Williston, S. W. 1898 B, p. 45, pls. v, vi.

Woodward, A. S. 1898 B, p. 235, fig. 143.

Zittel, K. A. 1890 A, p. 816, figs. 704-707.

Cretaceous (Niobrara); Kansas.

BAPTORNIS Marsh. Type *B. advenus* Marsh.

Marsh, O. C. 1877 B, p. 86.
 Fürbringer, M. 1888 A.
 Lydekker, R. 1891 C.
 Zittel, K. A. 1890 A, p. 828.

Baptornis advenus Marsh.

Marsh, O. C. 1877 B, p. 86.

Coues, E. 1884 A p. 826.
 Marsh, O. C. 1880 G, p. 192, figs. 37-39.
 Williston, S. W. 1898 B, p. 46.
 Zittel, K. A. 1890 A, p. 828.
 Cretaceous (Niobrara); Kansas.

CONIORNIS Marsh. Type *C. altus* Marsh.

Marsh, O. C. 1893 A, p. 81.

Coniornis altus Marsh.

Marsh, O. C. 1893 A, p. 81, figs. 1-3.
 Cretaceous; Montana.

Superorder DROMÆOGNATHILÆ Huxley.

Huxley, T. H. 1867 A, p. 418.

This suborder, as here recognized, is equivalent to the *Ratitæ* of Merrem plus the *Crypturi* (tinamous). It is the *Dromæognathæ* of Stejneger and the *Ratitæ* of Cope, 1898. Unless otherwise indicated, the following authorities are to be understood as employing the term *Ratitæ*.

Cope, E. D. 1889 R, p. 870.
 1891 N, p. 56.
 1898 B, p. 84.
 Cunningham, R. O. 1871 A.
 Fürbringer, M. 1885 A.
 1888 A.
 Gadow, H. 1885 A.
 1888 A.
 1891 A.
 1892 A, p. 237.
 1898 A, p. 30.
 Haeckel, E. 1895 A, p. 415.

Huxley, T. H. 1867 A, p. 418.

1872 A, p. 233.
 Menzbier, M. 1887 A.
 Mivart, St. G. 1874 A.
 1877 A.
 1892 A, p. 258.
 Newton, A. 1868 A.
 Nicholson and Lydekker 1889 A, p. 1222.
 Parker, W. K. 1866 A. ("Ostrich tribe.")
 1866 B. (Struthionidæ.)
 1875 A.
 1889 A.
 1895 A.
 Pavlow, A. 1885 A, p. 113.
 Selenka, E. 1869 A.
 Steinmann and Döderlein 1890 A, p. 671.
 Stejneger, L. 1885 A, p. 31. (*Dromæognathæ*.)
 Woodward, H. 1886 C, p. 370.
 Zittel, K. A. 1890 A, p. 825.

Order GASTORNITHES.

Cope, E. D. 1889 R, p. 870.
 1898 B, p. 85.

Nicholson and Lydekker 1889 A, p. 1228.
 Stejneger, L. 1885 A, p. 54.

GASTORNITHIDÆ.

Dollo, L. 1883 F, p. 297. (*Gastornis*.)
 Edwards, A. M. 1868 A, i, p. 165, pls. xxviii, xxix. (*Gastornis*.)
 Fürbringer, M. 1888 A, p. 1178.
 Hébert, E. 1855 A. (*Gastornis*.)
 1855 B. (*Gastornis*.)

Lydekker, R. 1891 A, p. 357.
 Newton, E. T. 1886 A, p. 143. (*Gastornis*.)
 Nicholson and Lydekker 1889 A, p. 1228.
 Owen, R. 1856 F, p. 204, pl. iii. (*Gastornis*.)
 Woodward, A. S. 1898 B, p. 241 (*Gastornis*.)
 Zittel, K. A. 1890 A, p. 836.

DIATRYMA Cope. Type *D. giganteum* Cope.

Cope, E. D. 1876 B.
 1876 A.
 1877 K, p. 69.
 Nicholson and Lydekker 1889 A, p. 1229.
 Zittel, K. A. 1890 A, p. 829.

Diatryma giganteum Cope.

Cope, E. D. 1876 B.
 1877 K, p. 70, pl. xxxii, figs. 23-25.
 Coues, E. 1884 A, p. 825. (*Gastornis*.)
 Stejneger, L. 1885 A, p. 55.
 Eocene; New Mexico.

BARORNIS Marsh. Type *B. regens* Marsh.

Marsh, O. C. 1894 J.

Barornis regens Marsh.

Marsh, O. C. 1894 J.
 Eocene; New Jersey.

Superorder EUORNITHES Stejneger.

Stejneger, L. 1885 A, p. 64.

This group is equivalent to that usually called *Carinatae*, with the tinamous and penguins removed. Unless otherwise indicated, the following authors employ the term *Carinatae*.

Cope, E. D. 1889 R, p. 870.

1891 N, p. 55. (Euornithes.)

1898 B, pp. 85, 94. (Euornithes.)

Fürbringer, M. 1885 A.

1888 A, p. 1141.

Gadow, H. 1888 A.

1891 A.

1892 A, p. 238.

1898 A, p. 31.

Haeckel, E. 1895 A, p. 413.

Huxley, T. H. 1867 A, p. 418.

1872 A, p. 234.

Lydekker, R. 1891 A, p. 1 (Carinatae); p. 2 (Euornithes).

Menzbier, M. 1887 A.

Newton, A. 1868 A.

Nicholson and Lydekker 1889 A, p. 1229.

Parker, W. K. 1870 A.

1875 A.

Pavlov, A. 1885 A, p. 113.

Selenka, E. 1869 A.

Shufeldt, R. W. 1885 A.

1886 A.

1886 B.

Steinmann and Döderlein 1890 A, p. 673.

Woodward, A. S. 1886 C, p. 370.

Zittel, K. A. 1890 A, p. 834.

Order CECOMORPHÆ Huxley.

Huxley, T. H. 1867 A.

Cope, E. D. 1889 R, p. 871.

1898 B, p. 95.

Coues, E. 1884 A. p. 732 (Longipennes); p. 787 (Pygopodes).

Gadow, H. 1898 A, p. 31. (Colymbiformes.)

Huxley, T. H. 1872 A, p. 234.

Mivart, St. G. 1892 A, p. 276 (Pygopodiformes); p. 275 (Gaviæ); p. 276 (Tubinares).

Shufeldt, R. W. 1890 B. (Pygopodes.)

1890 C. (Pygopodes.)

1891 C. (Pygopodes.)

1892 C. (Pygopodes.)

Stejneger, L. 1885 A, p. 64.

Zittel, K. A. 1890 A, p. 838 (Podicipitiformes); p. 843 (Tubinares); p. 844 (Charadriiformes, part).

Superfamily COLYMBOIDEA Stejneger.

Stejneger, L. 1885 A, p. 66. (Colymboideæ.)

Shufeldt, R. W. 1892 C. (Podicipoidea.)

COLYMBIDÆ.

Beddard, F. E. 1897 A, p. 468. (Colymbi.)

Coues, E. 1866 A. (Colymbus, but not as here recognized.)

1884 A, p. 789 (Colymbidæ); p. 792 (Podicipidæ).

Edwards, A. M. 1868 A, p. 278. (Colymbides.)

Fürbringer, M. 1888 A, p. 1153. (Colymbidæ, Podicipidæ.)

1890 B. (Colymbidæ, Podicipidæ.)

Fürbringer, M. 1896 A, p. 508. (Podicipidæ.)

Gadow, H. 1891 A.

Magnus, H. 1869 A.

Parker, W. K. 1868 A, p. 148. (Podicipinæ.)

Reichenow, A. 1871 A.

Selenka, E. 1869 A.

Shufeldt, R. W. 1890 A. (Podicipidæ.)

1892 C. (Podicipidæ.)

Stejneger, L. 1885 A, p. 66.

COLYMBUS Linn. Type *C. cristatus* Linn.

Beddard, F. E. 1897 A, p. 468.

Brandt, J. F. 1840 A, p. 161.

Edwards, A. M. 1868 A, p. 278.

Gadow, H. 1891 A, pl. ix, figs. 4-6; pl. xiii, fig. 6. (Podiceps.)

Giebel, C. G. 1866 A, p. 29. (On Podiceps.)

Lydekker, R. 1891 C.

Magnus, H. 1869 A. (On Podiceps.)

Owen, R. 1856 F, p. 212.

Shufeldt, R. W. 1890 A.

1892 C.

1894 B.

Colymbus auritus Linn.

Brandt, J. F. 1840 A, p. 204, pl. xiv. (Podiceps.)

Shufeldt, R. W. 1891 B, p. 818.

1892 D, p. 396.

1897 A, p. 646.

Recent; Northern Hemisphere: Pleistocene: Oregon, Tennessee.

Colymbus holbælii (Reinh.).

Shufeldt, R. W. 1891 B, p. 818.

1892 D, p. 396.

Recent; North America: Pleistocene (Equus beds); Oregon.

Colymbus nigricollis (Brehm.).

Cope, E. D. 1878 H, p. 389. (Podiceps "near californicus.")

1889 F. (Podiceps californicus.)

1889 S, p. 980. (Podiceps californicus.)

Shufeldt, R. W. 1890 A, p. 170, text figs. 1, 2.

1891 B, p. 818. (C. n. californicus.)

1892 D, p. 396. (C. n. californicus.)

Recent; Western North America: Pleistocene (Equus beds); Oregon.

ÆCHMOPHORUS Coues. Type *Podiceps occidentalis* Lawr.

Coues, E. 1862, Proc. Acad. Nat. Sci. Phila., p. 229.
1884 A, p. 793.

Æchmophorus occidentalis (Lawr.).

Cope, E. D. 1878 H, p. 389. (Podiceps.)
1889 F. (Podiceps.)

Cope, E. D. 1889 S, pp. 978, 980. (Podiceps.)
Coues, E. 1884 A, p. 793.

Shufeldt, R. W. 1891 B, p. 818.

1892 D, p. 396.

Recent; Western North America: Pleistocene;
Oregon.

PODILYMBUS Lesson. Type *Colymbus podiceps* Linn.

Lesson, 1831, Traité d'Orn., p. 595.

Coues, E. 1884 A, p. 796.

Shufeldt, R. W. 1890 A, p. 173.

Podilymbus podiceps (Linn.).

Cope, E. D. 1878 H, p. 389.
1889 F

Cope, E. D. 1889 S, p. 980.

Coues, E. 1884 A, p. 797. (P. podicipes.)

Shufeldt, R. W. 1891 B, p. 818.

1892 D, p. 396.

Recent; North America: Pleistocene; Ore-
gon.

Superfamily *ALCOIDEA* Stejneger.

Stejneger, J. 1885 A, p. 68. (Alcoideæ.)

ALCIDÆ.

Blyth, E. 1837 A.

Coues, E. 1884 A, p. 797.

Edwards, A. M. 1868 A, p. 278.

Fürbringer, M. 1888 A, p. 1148.

Gadow, H. 1891 A.

Huxley, T. H. 1867 A, p. 458.

Owen, R. 1856 F, p. 212. (Alca.)

Parker, W. K. 1868 A, p. 146. (Alcinae.)

Reichenow, A. 1871 A.

Selenka, E. 1869 A.

Shufeldt, R. W. 1888 A.

1889 B.

1889 C.

1890 A.

1891 C.

PLAUTUS Brünnich. Type *Alca impennis* Linn.

Brünnich, 1772, Zool. Fundamenta, p. 78.

The genus *Plautus* is included by many
authors in *Alca*; hence references are given to
the literature of the last-named genus.

Coues, E. 1884 A, p. 819. (Alca.)

Giebel, C. G. 1866 A, p. 29. (Alca.)

Lucas, F. A. 1888 A.

Menzbier, M. 1887 A.

Newton, A. 1875 A, p. 733. (Alca.)

Owen, R. 1856 F, p. 212. (Alca.)

Shufeldt, R. W. 1888 A. (Alca, *Plautus*.)

1889 B. (Alca.)

1889 C. (Alca.)

Plautus impennis (Linn.).

American Naturalist 1869 A. (Alca.)

Blasius, W. 1884 A. (Alca.)

Blyth, E. 1837 A. (Alca.)

Champley, R. 1864 A. (Alca.)

Coues, E. 1869 A. (Alca.)

Coues, E. 1884 A, p. 819, fig. 561. (Alca.)

Lucas, F. A. 1888 A.

1890 C, p. 493, pls. lxxii, lxxiii. ("Great
auk.")

Menzbier, M. 1887 A.

Newton, A. 1861 A. (Alca.)

1870 A. (Alca.)

1875 A, p. 731. (Alca.)

1879 A. (Alca.)

Orton, J. 1869 A. (Alca.)

Owen, R. 1864 A. (Alca.)

1866 C, pls. i-iii. (Alca.)

Preyer, W. 1862 A.

Selenka, E. 1869 A, pl. ix, figs. 1, 2. (Alca.)

Shufeldt, R. W. 1888 A, pl. v, figs. 24, 25.

Steenstrup, J. 1855 A, plate.

Stejneger, L. 1885 A, p. 72, fig. 32.

Wyman, J. 1867 A.

Recently extinct; once an inhabitant of
Newfoundland, Iceland, Denmark, etc.

URIA Brisson. Type *Colymbus troile* Linn.

Coues, E. 1884 A, p. 814 (*Uria*); p. 816 (*Lomvia*).

Selenka, E. 1869 A, pl. ix, fig. 7; pl. lvii, fig. 10.

Shufeldt, R. W. 1889 B, p. 165, pl. vii; p. 537, text
figs 1, 2, 4, 5, 6, 8.

1889 C.

Uria affinis (Marsh).

Marsh, O. C. 1872 J, p. 259. (Catarractes.)

Coues, E. 1872 B, p. 350. (Catarractes.)

1884 A, p. 825. (*Lomvia*.)

Marsh, O. C. 1870 A, p. 214. (No name.)

Pleistocene; New Jersey.

Uria antiqua (Marsh).

Marsh, O. C. 1870 A, p. 213. (Catarractes.)

Cope, E. D. 1869 M (1870), p. 237. (Catarractes.)

1875 V, p. 41. (Catarractes.)

Coues, E. 1872 B, p. 350. (Catarractes.)

1884 A, p. 825. (*Lomvia*.)

Miocene; North Carolina.

*Superfamily LAROIDEA Stejneger.**Stejneger, L. 1885 A, p. 74. (Laroidea.)*

LARIDÆ.

Brandt, J. F. 1840 A, p. 165.

Coues, E. 1884 A, p. 733.

Edwards, A. M. 1868 A, p. 302.

Fürbringer, M. 1888 A, p. 1158.

Gadow, H. 1891 A.

1898 A, p. 35. (Lari.)

Parker, W. K. 1868 A, p. 153. (Larinae.)

Reichenow, A. 1871 A.

Selenka, E. 1869 A.

Shufeldt, R. W. 1890 A.

1890 B.

1891 C.

Stejneger, L. 1885 A, p. 77.

Zittel, K. A. 1890 A, p. 845.

LARUS Linnaeus. Type *Larus canus* Linn.

Coues, E. 1884 A, p. 740.

Edwards, A. M. 1868 A, p. 305.

Huxley, T. H. 1867 A, p. 430, fig. 11.

Owen, R. 1856 F, p. 212.

Selenka, E. 1869 A, pl. xv, fig. 12; pl. xvii, figs. 12, 16.

Shufeldt, R. W. 1888 A, pl. ii, figs. 2-12; pl. iv, fig. 21.

1889 B, pl. vii, fig. 6; pl. ix, fig. 12; pl. x, fig. 18; pl. xi, fig. 26.

1890 A, p. 545, figures.

1890 B, p. 66, with figures.

1891 C.

Larus argentatus Brunn.

Coues, E. 1884 A, p. 743.

Shufeldt, R. W. 1891 B, p. 818. (L. a. smithsonianus.)

1892 D, p. 397. (L. a. smithsonianus.)

Recent; North America: Pleistocene; Oregon.

Larus californicus? Lawr.

Coues, E. 1884 A, p. 745.

Shufeldt, R. W. 1891 B, p. 818.

1892 D, p. 398.

Recent; Western North America: Pleistocene; Oregon.

Larus oregonus Shufeldt.

Shufeldt, R. W. 1892 D, p. 398, pl. xv, fig. 3.

1891 B, p. 818. (No description.)

Pleistocene; Oregon.

Larus philadelphia (Ord).

Coues, E. 1884 A, p. 751. (Chroicocephalus.)

Shufeldt, R. W. 1891 B, p. 818.

1892 D, p. 399.

Recent; North America: Pleistocene; Oregon.

Larus robustus Shufeldt.

Shufeldt, R. W. 1891 B, p. 818.

1892 D, p. 398, pl. xv, figs. 1, 2.

Pleistocene; Oregon.

XEMA Leach. Type *Larus sabinii* (Sab.).

Coues, E. 1884 A, p. 753.

Shufeldt, R. W. 1893 A.

Xema sabinii (Sab.).

Coues, E. 1885 A, p. 753.

Shufeldt, R. W. 1891 B, p. 818.

1892 D, p. 399.

1893 A.

Recent; Arctic America and Europe: Pleistocene; Oregon.

HYDROCHELIDON Boie. Type *Sterna nigra* Linn.

Coues, E. 1884 A, p. 770.

Hydrochelidon nigra (Linn.).

Coues, E. 1884 A, p. 770. (H. lariformis.)

Shufeldt, R. W. 1891 B, p. 818. (H. n. surinamensis.)

1892 D, p. 399. (H. n. surinamensis.)

Recent; Old and New Worlds: Pleistocene; Oregon.

STERNA Linn. Type *Sterna caspia* Pall.

Brandt, J. F. 1840 A, p. 218.

Coues, E. 1884 A, p. 756.

Selenka, E. 1869 A, pl. viii, fig. 13.

Shufeldt, R. W. 1893 A.

Sterna elegans? Gamb.

Coues, E. 1884 A, p. 760.

Shufeldt, R. W. 1891 B, p. 818.

1892 D, p. 399.

Recent; New England to California and Brazil: Pleistocene; Oregon.

Sterna forsteri? Nutt.

Coues, E. 1884 A, p. 763.

Shufeldt, R. W. 1891 B, p. 818. (S. forsteri.)

1892 D, p. 399. (S. forsteri.)

Recent; North America: Pleistocene; Oregon.

Superfamily PROCELLAROIDEA Stejneger.

Stejneger, L. 1885 A, p. 84. (Procellaroideæ.)
 Beddard, F. E. 1897 A, p. 468.
 Coues, E. 1884 A, p. 773. (Tubinares.)
 Fürbringer, M. 1888 A, p. 1162. (Tubinares.)
 Gadow, H. 1898 A, p. 32. (Procellariæ.)
 Mivart, St. G. 1892 A, p. 276. (Tubinares.)

Nicholson and Lydekker 1889 A, p. 1232. (Tubinares.)
 Pycraft, W. P. 1899 A, p. 381. (Tubinares.)
 Shufeldt, R. W. 1888 E. (Tubinares.)
 Zittel, K. A. 1890 A, p. 843. (Tubinares.)

PROCELLARIIDÆ.

Coues, E. 1884 A, p. 773.
 Fürbringer, M. 1888 A, p. 1162.

Pycraft, W. P. 1899 A, p. 402.
 Stejneger, L. 1885 A, p. 88.

PUFFINUS Brisson. Type *Procellaria puffinus* Brunn.

Coues, E. 1884 A, p. 783.
 Pycraft, W. P. 1899 A, p. 382.
 Selenka, E. 1869 A, pl. xvii, fig. 15.

Puffinus conradi Marsh.

Marsh, O. C. 1870 A, p. 212.

Cope, E. D. 1869 M (1870), p. 237.
 Coues, E. 1872 B, p. 350.
 1884 A, p. 825.
 Marsh, O. C. 1870 G.
 Miocene; Maryland.

Order GRALLÆ.

Beddard, F. E. 1897 A, p. 469.
 Cope, E. D. 1898 B, p. 89.
 Coues, E. 1884 A, p. 596 (Limicolæ); p. 665 (Alectoridae).
 Fürbringer, M. 1888 A, p. 1235 (Fulicariæ); p. 1420 (Limicolæ).
 Gadow, H. 1898 A, p. 35. (Charadriiformes.)
 Haeckel, E. 1895 A, p. 414. (Charadriornithes.)
 Huxley, T. H. 1867 A, p. 457. (Charadriomorphæ, Geranomorphæ.)
 1872 A, p. 234. (Charadriomorphæ, Geranomorphæ.)

Mivart, St. G. 1892 A, p. 273 (Alectoridae); p. 275 (Limicolæ).
 Owen, R. 1856 F, p. 208.
 Parker, W. K. 1868 A, p. 163.
 Selenka, E. 1869 A. (Limicolæ, etc.)
 Shufeldt, R. W. 1883 A. (> Limicolæ.)
 1884 A. (> Limicolæ.)
 1894 A.
 Stejneger, L. 1885 A, p. 91.

Superfamily SCOLOPACOIDEA Stejneger.

Stejneger, L. 1885 A, p. 94. (Scolopacoideæ.)
 Gadow, H. 1898 A, p. 35. (Limicolæ.)

Huxley, T. H. 1867 A, p. 457. (Charadriomorphæ.)

CHARADRIIDÆ.

Coues, E. 1885 A, p. 597.
 Edwards, A. M. 1868 A, p. 367. (Totanides, in part.)
 Fürbringer, M. 1888 A.

Selenka, E. 1869 A.
 Stejneger, L. 1885 A, p. 98.
 Zittel, K. A. 1890 A, p. 844.

CHARADRIUS Linn. Type *Tringa squatarola* Linn.

Cope, E. D. 1884 O, p. 754.
 Coues, E. 1884 A, p. 599.
 Edwards, A. M. 1868 A, p. 375.
 Huxley, T. H. 1867 A, p. 427, figs. 6-8.
 Shufeldt, R. W. 1888 A, pl. ii, fig. 10.
 1890 A, pl. xii, figs. 5, 6.
 1891 C.

Charadrius sheppardianus Cope.

Cope, E. D. 1881 B.
 1884 A, p. 823.
 1884 O, p. 755, pl. lix, fig. 5.
 Coues, E. 1884 A, p. 823.
 Zittel, K. A. 1890 A, p. 844.
 Eocene; Colorado.

SCOLOPACIDÆ.

Coues, E. 1884 A, p. 612 (Phalaropodidæ); p. 614 (Scolopacidæ).
 Edwards, A. M. 1868 A, p. 367. (Totanides, part.)
 Fürbringer, M. 1888 A.
 Gadow, H. 1891 A.
 Parker, W. K. 1868 A, p. 155. (Scolopacinae.)

Reichenow, A. 1871 A. (Scolopacidæ, Phalaropodidæ.)
 Shufeldt, R. W. 1884 A. (Numenius.)
 Stejneger, L. 1885 A, p. 105.
 Zittel, K. A. 1890 A, p. 844.

PALÆOTRINGA Marsh. Type *P. littoralis* Marsh.

Marsh, O. C. 1870 A, p. 208.
1870 G.

Zittel, K. A. 1890 A, p. 844.

Palæotringa littoralis Marsh.

Marsh, O. C. 1870 A, p. 208.

Cope, E. D. 1869 M (1870), p. 238.
1875 E, p. 246.

Coues, E. 1872 B, p. 349.

1884 A, p. 828. (P. littoralis.)

Marsh, O. C. 1870 G.

1873 D, p. 229.

1880 G, p. 199.

Cretaceous; New Jersey.

Palæotringa vagans Marsh.

Marsh, O. C. 1872 E, p. 365.

Coues, E. 1872 B, p. 349.

1884 A, p. 828.

Marsh, O. C. 1873 D, p. 229.

1880 G, p. 200.

Cretaceous; New Jersey.

Palæotringa vetus Marsh.

Marsh, O. C. 1870 A, p. 209.

Cope, E. D. 1869 M (1870), p. 238.

1875 E, p. 246.

Coues, E. 1872 B, p. 349.

1884 A, p. 828.

Harlan, R. 1835 B, p. 280. ("Scolopax.")

Leidy, J. 1851 H, p. 330. ("Scolopax.")

1865 A, p. 2. ("Scolopax.")

1866 B, p. 237. ("Scolopax.")

Marsh, O. C. 1870 G.

1873 E, p. 229.

1880 G, p. 200.

Morton, S. G. 1834 A, p. 32. (No name.)

Cretaceous; New Jersey.

PHALAROPUS Brisson. Type *Tringa lobata* Linn.

Coues, E. 1884 A, p. 612 (Steganopus); p. 614 (Lobipes).

Edwards, A. M. 1868 A, p. 375.

Phalaropus lobatus (Linn.)

Coues, E. 1884 A, p. 613. (Lobipes hyperboreus.)

Shufeldt, R. W. 1891 B, p. 820.

1892 D, p. 413.

Recent; Northern Hemisphere: Pleistocene; Oregon.

Superfamily GRUIOIDEA Stejneger.

Stejneger L. 1885 A, p. 121. (Gruioideæ.)

Beddard, F. E. 1897 A, p. 469. (Grues.)

Gadow, H. 1898 A, p. 34. (Gruiformes.)

Huxley, T. H. 1867 A, p. 457. (Geranomorphæ.)

Selenka, E. 1869 A.

Shufeldt, R. W. 1894 A. (Gruioidea.)

GRUIDÆ.

Coues, E. 1884 A, p. 666.

Edwards, A. M. 1871 A, p. 1. (Gruides.)

Fürbringer, M. 1888 A, p. 1203.

Gadow, H. 1891 A.

Owen, R. 1856 F, p. 213.

Parker, W. K. 1868 A, p. 158. (Gruinæ.)

Selenka, E. 1869 A.

Shufeldt, R. W. 1894 A.

Stejneger, L. 1885 A, p. 123.

Zittel, K. A. 1890 A, p. 846.

GRUS Pallas. Type *Ardea grus* Linn.

Coues, E. 1884 A, p. 666.

Edwards, A. M. 1871 A, p. 1.

Huxley, T. H. 1867 A, p. 426, fig. 9.

Owen, R. 1856 F, p. 209.

Parker, W. K. 1868 A, p. 158.

Selenka, E. 1869 A, pl. x, fig. 8, pl. xi, fig. 14.

Shufeldt, R. W. 1894 A.

Coues, E. 1872 B, p. 348.

1884 A, p. 823.

King, C. 1878 A, p. 430.

Marsh, O. C. 1870 G.

Pliocene (?); Nebraska.

Grus proavus Marsh.

Marsh, O. C. 1872 J, p. 261.

Coues, E. 1872 B, p. 348.

1884 A, p. 823.

Pleistocene; New Jersey.

ALETORNIS Marsh. Type *A. nobilis* Marsh.

Marsh, O. C. 1872 J, p. 256.

Fürbringer, M. 1888 A.

Zittel, K. A. 1890 A, p. 846.

King, C. 1878 A, p. 404.

Eocene (Bridger); Wyoming.

Aletornis gracilis Marsh.

Marsh O. C. 1872 J, p. 258.

Coues, E. 1872 B, p. 348.

1884 A, p. 824.

King, C. 1878 A, p. 404.

Eocene (Bridger); Wyoming.

Aletornis bellus Marsh.

Marsh, O. C. 1872 J, p. 258.

Coues, E. 1872 B, p. 349.

1884 A, p. 824.

Aletornis nobilis Marsh.*Marsh, O. C.* 1872 J, p. 256.

Coues, E. 1872 B, p. 348.

1884 A, p. 823.

King, C. 1878 A, p. 404.

Eocene (Bridger); Wyoming.

Aletornis pernix Marsh.*Marsh, O. C.* 1872 J, p. 256.

Coues, E. 1872 B, p. 348.

Coues, E. 1884 A, p. 824.

King, C. 1878 A, p. 404.

Eocene (Bridger); Wyoming.

Aletornis venustus Marsh.*Marsh, O. C.* 1872 J, p. 257.

Coues, E. 1872 B, p. 348.

1884 A, p. 824.

King, C. 1878 A, p. 404.

Eocene (Bridger); Wyoming.

RALLIDÆ.

Coues, E. 1884 A, p. 669.

Edwards, A. M. 1871 A, p. 110.

Fürbringer, M. 1888 A, p. 1235.

Gadow, H. 1891 A.

Parker, W. K. 1868 A, p. 161. (Rallinæ.)

Selenka E. 1869 A.

Shufeldt, R. W. 1888 B. (On Porzana.)

1894 A.

Stejneger, L. 1885 A, p. 127.

Zittel, K. A. 1890 A, p. 846.

CRECROIDES Shufeldt. Type *C. osbornii* Shufeldt.*Shufeldt, R. W.* 1892 B, p. 253.

1892 D, p. 411, footnote. (Crecoïdes.)

1892, in Cope, E. D. 1892 J, p. 125.

Crecoïdes osbornii Shufeldt.*Shufeldt, R. W.* 1892 B, p. 253.*Shufeldt, R. W.* 1892, in Cope E. D. 1892 J, p. 125.
Pleistocene; Texas.TELMATORNIS Marsh. Type *T. priscus* Marsh.*Marsh, O. C.* 1870 A, p. 210.

Fürbringer, M. 1888 A, p. 1235.

Marsh, O. C. 1870 G.

Zittel, K. A. 1890 A, p. 846.

Telmatornis affinis Marsh.*Marsh, O. C.* 1870 A, p. 211.

Cope, E. D. 1869 M (1870), p. 238.

1875 E, p. 246.

Coues, E. 1872 B, p. 349.

1884 A, p. 829.

Marsh, O. C. 1870 G.

1873 D, p. 229.

Marsh, O. C. 1880 G, p. 201.

Cretaceous; New Jersey.

Telmatornis priscus Marsh.*Marsh, O. C.* 1870 A, p. 210.

Cope, E. D. 1869 M (1870), p. 238.

1875 E, p. 246.

Coues, E. 1872 B, p. 349.

1884 A, p. 829.

Marsh, O. C. 1870 G.

1873 D, p. 229.

1880 G, p. 200.

Cretaceous; New Jersey.

FULICA Linn. Type *F. atra* Linn.

Coues, E. 1884 A, p. 676.

Fürbringer, M. 1888 A, p. 1235.

Zittel, K. A. 1890 A, p. 846.

Fulica americana Gmel.

Cope, E. D. 1889 F.

1889 S, p. 980.

Coues, E. 1884 A, p. 676.

Shufeldt, R. W. 1891 B, p. 819.

1892 D, p. 411.

Recent; North America: Pleistocene; Oregon.

Fulica minor Shufeldt.*Shufeldt, R. W.* 1892 D, p. 412, pl. xvii, fig. 32.

1891 B, p. 820. (No description).

Pleistocene; Oregon.

Order CHENOMORPHÆ Huxley.

Huxley, T. H. 1867 A, p. 460.

Cope, E. D. 1898 B, p. 88.

Coues, E. 1884 A, p. 677. (Lamelliostres.)

Edwards, A. M. 1868 A, i, p. 127. (Lamelliostres.)

Fürbringer, M. 1888 A, p. 1173 (Anseres); p. 1184 (Phœnicopteridæ).

Gadow, H. 1891 A. (Lamelliostres.)

1898 A, p. 33. (Anseriformes.)

Huxley, T. H. 1872 A, p. 234. (Chenomorphæ.)

Mivart, St. G. 1892 A, p. 277. (Lamelliostres.)

Owen, R. 1856 F, p. 211. (Natatores.)

Selenka, E. 1869 A. (Lamelliostres.)

Shufeldt, R. W. 1889 A. (Anseres.)

Stejneger, L. 1885 A, p. 132.

Zittel, K. A. 1890 A, p. 836 (Anseriformes); p. 839 (Ciconiiformes).

Superfamily ANATOIDEA Stejneger.

Stejneger, L. 1885 A, p. 136. (Anatoidæ.)
Gadow, H. 1898 A, p. 33. (Anseres.)
Giebel, C. G. 1866 A, p. 28. (Anseres.)

Magnus, H. 1869 A. (Natatores.)
Reichenow, A. 1871 A. (Anseres.)
Shufeldt, R. W. 1889 A. (Anseres.)

ANATIDÆ.

Beddard, F. E. 1897 A, p. 466.
Coues, E. 1884 A, p. 679.
Gadow, H. 1891 A.
Owen, R. 1856 F, p. 213.

Parker, W. K. 1868 A, p. 152. (Anatinæ.)
Selenka, E. 1869 A.
Shufeldt, R. W. 1889 A.

LOPHODYTES Reichenbach. Type *Mergus cucullatus* Linn.

Coues, E. 1884 A, p. 716.

Lophodytes cucullatus (Linn.).

Coues, E. 1884 A, p. 718. (Mergus.)

Shufeldt, R. W. 1891 B, p. 818.
 1892 D, p. 402.
 Recent; North America: Pleistocene; Oregon.

ANAS Linn. Type *A. boschas* Linn.

Coues, E. 1884 A, p. 691.
Gadow, H. 1891 A, pl. iv, fig. 2.
Giebel, C. G. 1866 A, p. 28.
Selenka, E. 1869 A.
Shufeldt, R. W. 1889 A.
Zittel, K. A. 1890 A, p. 637.

Anas americana Gmel.

Coues, E. 1884 A, p. 694. (Mareca.)
Shufeldt, R. W. 1891 B, p. 818.
 1892 D, p. 403.

Recent; North America: Pleistocene; Oregon.

Anas boschas Linn.

Coues, E. 1884 A, p. 691. (*A. boschas*.)
Selenka, E. 1869 A, pl. ii, fig. 9.
Shufeldt, R. W. 1889 A, p. 233.
 1891 B, p. 818.
 1892 D, p. 403.

Recent; Northern Hemisphere: Pleistocene; Oregon.

Anas carolinensis Gmel.

Coues, E. 1884 A, p. 695. (Querquedula.)
Shufeldt, R. W. 1891 B, p. 818.
 1892 D, p. 403.

Recent; North America: Pleistocene; Oregon.

Anas cyanoptera ? Vieill.

Coues, E. 1884 A, p. 696. (Querquedula.)
Shufeldt, R. W. 1891 D, p. 818.
 1892 D, p. 404.

Recent; South America, Western North America: Pleistocene; Oregon.

Anas discors Linn.

Coues, E. 1884 A, p. 696. (Querquedula.)
Shufeldt, R. W. 1889 A.
 1891 B, p. 818.
 1892 D, p. 403.

Recent; North America: Pleistocene; Oregon.

SPATULA Boie. Type *Anas clypeata* Linn.

Coues, E. 1884 A, p. 696.
Shufeldt, R. W. 1889 A, p. 230.
Zittel, K. A. 1890 A, p. 838.

Spatula clypeata (Linn.).

Coues, E. 1884 A, p. 696.

Selenka, E. 1869 A, pl. x, fig. 5. (*Anas*.)
Shufeldt, R. W. 1889 A, p. 230, figs. 15, 16, 20, 22-25.
 1891 B, p. 819.
 1892 D, p. 404.
 Recent; North America, Europe, Asia: Pleistocene; Oregon.

DAFILA Stephens.

Coues, E. 1884 A, p. 692.

Dafila acuta (Linn.).

Coues, E. 1884 A, p. 692.

Shufeldt, R. W. 1891 B, p. 819.
 1892 D, p. 404.
 Recent; Northern Hemisphere: Pleistocene; Oregon.

AIX Boie. Type *Anas sponsa* Linn.

Coues, E. 1884 A, p. 697.

Aix sponsa (Linn.).

Coues, E. 1884 A, p. 698.

Shufeldt, R. W. 1891 B, p. 819.
 1892 D, p. 405.
 Recent; North America: Pleistocene; Oregon.

ATHYA Boie. Type *Anas ferina* Linn.

Coues, E. 1884 A, p. 701. (Fuligula.)

Athya marila.

Coues, E. 1884 A, p. 701. (Fuligula.)

Shufeldt, R. W. 1891 B, p. 819.

1892 D, p. 405.

Recent; North America: Pleistocene; Oregon.

GLAUCIONETTA Stejneger. Type *Anas clangula* Linn.

Coues, E. 1884 A, p. 704. (<Clangula.)

Shufeldt, R. W. 1889 A, p. 235.

Glaucionetta islandica (Gmel.)

Coues, E. 1884 A, p. 704. (Clangula.)

Shufeldt, R. W. 1889 A, p. 235, figs. 19, 21, 26.

1891 B, p. 819.

1892 D, p. 405.

Recent; North America and Northern Europe: Pleistocene; Oregon.

CLANGULA Leach. Type *Anas glacialis* Linn.

Coues, E. 1884 A, p. 704 (Clangula); p. 706 (Harelda).

Clangula hyemalis (Linn.).

Coues, E. 1884 A, p. 706. (Harelda glacialis.)

Shufeldt, R. W. 1891 B, p. 819.

1892 D, p. 406.

Recent; Northern Hemisphere: Pleistocene; Oregon.

CHEN Boie.

Coues, E. 1884 A, p. 685.

Chen hyperborea (Pall.).

Coues, E. 1884 A, p. 685. (C. hyperboreus.)

Shufeldt, R. W. 1891 B, p. 819.

1892 D, p. 409.

Recent; North America: Pleistocene; Oregon.

ANSER Brisson. Type *Anas anser* Linn.

Coues, E. 1884 A, p. 684.

Owen, R. 1856 F, p. 211.

Selenka, E. 1869 A, pl. xvii, fig. 10.

Shufeldt, R. W. 1889 A.

Anser albifrons (Gmel.).

Cope, E. D. 1878 H, p. 389.

1889 F.

1889 S, p. 980.

Coues, E. 1884 A, p. 684.

Shufeldt, R. W. 1891 B, p. 819.

1892 D, p. 408.

Recent, Northern regions: Pleistocene; Oregon.

Anser condoni Shufeldt.

Shufeldt, R. W. 1892 D, p. 406, pl. xvi, figs. 19, 26, 27,

1891 A, p. 819. (Name only.)

Pleistocene; Oregon.

BRANTA Scopoli. Type *Anas bernicla* Linn.

Coues, E. 1884 A, p. 686. (Bernicla.)

Shufeldt, R. W. 1889 A.

Branta canadensis (Linn.).

Cope, E. D. 1878 H, p. 389. (Anser.)

1889 F. (Anser.)

1889 S, pp. 978, 980. (Anser.)

Coues, E. 1884 A, p. 688. (Bernicla.)

Shufeldt, R. W. 1889 A, p. 248, figs. 27-30.

1891 B, p. 819.

1892 D, p. 408.

Recent; North America: Pleistocene; Oregon.

Branta hypsibata (Cope).

Cope, E. D. 1878 H, p. 387. (Anser.)

1889 F.

Cope, E. D. 1889 S, p. 980.

Coues, E. 1884 A, p. 824. (Bernicla hypsibates.)

Shufeldt, R. W. 1891 B, p. 819.

1892 D, p. 407.

Zittel, K. A. 1890 A, p. 838.

Pleistocene; Oregon.

Branta propinqua Shufeldt.

Shufeldt, R. W. 1892 D, p. 407, pl. xv, fig. 17.

Cope, E. D. 1878 H, p. 389. (Anser, "near nigricans.")

1889 F. (Anser, "near nigricans.")

1889 S, p. 890. Anser, "near nigricans.")

Shufeldt, R. W. 1891 B, p. 819.

Pleistocene; Oregon.

OLOR Wagler. Type *Anas cygnus* Linn.

Coues, E. 1884 A, p. 682. (Cygnus.)

Selenka, E. 1869 A, pl. x, figs. 2, 3. (Cygnus.)

Shufeldt, R. W. 1889 A, p. 233.

Olor paloregonus Cope.

Cope, E. D. 1878 H, p. 388. (Cygnus.)

Cope, E. D. 1889 F. (Cygnus.)

1889 S, pp. 978, 980. (Cygnus.)

Coues, E. 1884 A, p. 824. (Cygnus.)

Shufeldt, R. W. 1891 B, p. 819.

1892 D, p. 409, pl. xvi, figs. 18, 21, 25.

Pleistocene; Oregon.

LAORNIS Marsh. Type *L. edwardsianus* Marsh.

Marsh, O. C. 1870 A, p. 206.

Fürbringer, M. 1888 A, pp. 1141, 1159, 1174.

Marsh, O. C. 1870 G.

Stejneger, L. 1885 A, p. 30.

Zittel, K. A. 1890 A, p. 837.

Laornis edwardsianus Marsh.

Marsh, O. C. 1870 A, p. 206.

Cope, E. D. 1869 M (1870), p. 237.

Cope, E. D. 1875 E, p. 245.

Coues, E. 1872 B, p. 350.

1884 A, p. 828.

Marsh, O. C. 1870 G.

1873 D, p. 230.

1880 G, p. 199.

Cretaceous; New Jersey.

Superfamily PHÆNICOPTEROIDEA Stejneger.

Stejneger, L. 1885 A, p. 153. (Phœnicopteroideæ.)

Gadow, H. 1898 A, p. 33. (Phœnicopteri.)

Huxley, T. H. 1867 A, p. 460. (Amphimorphæ.)

1872 A, p. 234. (Amphimorphæ.)

PHÆNICOPTERIDÆ.

Coues, E. 1884 A, p. 678.

Edwards, A. M. 1871 A, p. 53. (Phœnicopterides.)

Fürbringer, M. 1888 A, p. 1184.

Gadow, H. 1891 A.

Parker, W. K. 1868 A, p. 166. (Phœnicopterinae.)

Reichenow, A. 1871 A.

Seebohm, H. 1889 A. (Phœnicopteri.)

Selenka, E. 1869 A.

Stejneger, L. 1885 A, p. 154.

Zittel, K. A. 1890 A, p. 839. (Phœnicopteri.)

PHÆNICOPTERUS Linn. Type *P. ruber* Linn.

Coues, E. 1884 A, p. 678.

Edwards, A. M. 1871 A, p. 53.

Fürbringer, M. 1888 A.

Gadow, H. 1877 A.

1891 A, pl. lvii, fig. 20.

Parker, W. K. 1869 B.

Selenka, E. 1869 A.

Phœnicopterus copei Shufeldt.

Shufeldt, R. W. 1892 D, p. 410, pl. xv, fig. 13; pl.

xvii, figs. 28, 29, 38.

1891 B, p. 820.

Pleistocene; Oregon.

Order HERODII.

Beddard, F. E. 1897 A, p. 469. (Herodiones.)

Cope, E. D. 1898 B, p. 88.

Coues, E. 1884 A, p. 647. (Herodiones.)

Fürbringer, M. 1888 A, p. 1187. (Pelargo-Herodii.)

Gadow, H. 1891 A.

Huxley, T. H. 1867 A, p. 461. (Pelargomorphæ.)

1872 A, p. 234. (Pelargomorphæ.)

Mivart, St. G. 1892 A, p. 272. (Herodiones.)

Seebohm, H. 1889 A. (Herodiones.)

Selenka, E. 1869 A.

Stejneger, L. 1885 A, p. 157.

Zittel, K. A. 1890 A, p. 840. (Pelargo-Herodii.)

Superfamily ARDEOIDEA Stejneger.

Stejneger, L. 1885 A, p. 162. (Ardecoideæ.)

Gadow, H. 1898 A, p. 32. (Ardeæ.)

ARDEIDÆ.

Coues, E. 1884 A, p. 654.

Edwards, A. M. 1871 A, p. 88. ("Ardéides.")

Fürbringer, M. 1888 A.

Gadow, H. 1891 A.

Giebel, C. G. 1866 A, p. 27.

Huxley, T. H. 1867 A, p. 439.

Magnus, H. 1869 A.

Parker, W. K. 1868 A, p. 163. (Ardeinae.)

Reichenow, A. 1871 A.

Seebohm, H. 1889 A.

Selenka, E. 1869 A.

Zittel, K. A. 1890 A, p. 841.

ARDEA Linn. Type *A. cinerea* Linn.

Coues, E. 1884 A, p. 657.

Edwards, A. M. 1871 A, p. 91.

Gadow, H. 1891 A.

Huxley, T. H. 1867 A, p. 437, fig. 19.

Magnus, H. 1869 A.

Owen, R. 1856 F, p. 209.

Selenka, E. 1869 A, pl. xi, fig. 11; pl. xvii, figs. 8, 9.

Zittel, K. A. 1890 A, p. 841.

Ardea paloccidentalis Shufeldt.

Shufeldt, R. W. 1892 D, p. 411, pl. xvii, fig. 3.

1891 B, p. 819. (No description.)

Pleistocene; Oregon.

Order STEGANOPODES.

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| Beddard, F. E. 1897 A, p. 468. | Mivart, St. G. 1892 A, p. 272. |
| Brandt, J. F. 1840 A, p. 91. (Steganopoda.) | Pycraft, W. P. 1898 A, p. 82. |
| Cope, E. D. 1898 B, p. 88. | Seeböhm, H. 1889 A. |
| Coues, E. 1884 A, p. 718. | Selenka, E. 1869 A. |
| Fürbringer, M. 1888 A, p. 1168. | Shufeldt, R. W. 1888 E. |
| Gadow, H. 1891 A. | 1894 C. |
| 1898 A, p. 32. | 1894 D. |
| Giebel, C. G. 1866 A, p. 29. (Steganopoda.) | Stejneger, L. 1885 A, p. 179. |
| Huxley, T. H. 1867 A, p. 461. (Dysporomorphæ.) | Zittel, K. A. 1890 A, p. 841. |

Superfamily PELECANOIDEA Stejneger.

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| <i>Stejneger</i> , L. 1885 A, p. 185. (Pelecanoidæ.) | Shufeldt, R. W. 1899 C. (Pelecanoidæ.) |
| | 1894 D. (Pelecanoidæ.) |

PELECANIDÆ.

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|---|-------------------------------|
| Coues, E. 1884 A, p. 721. | Reichenow, A. 1871 A. |
| Edwards, A. M. 1868 A, i, p. 180. | Selenka, E. 1869 A. |
| Fürbringer, A. 1891 A. | Shufeldt, R. W. 1888 E. |
| Gadow, H. 1891 A. | 1894 C. |
| Huxley, T. H. 1867 A, p. 440. | 1894 D. |
| Mivart, St. G. 1878 A. | Zittel, K. A. 1890 A, p. 841. |
| Parker, W. K. 1868 A, p. 149. (Pelecaninæ.) | |

PELECANUS Linn. Type *P. onocrotalus* Linn.

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| Brandt, J. F. 1840 A, p. 141. | Shufeldt, R. W. 1888 E, p. 310, figs. 40-43. |
| Coues, E. 1884 A, p. 722. | 1894 B. |
| Edwards, A. M. 1868 A, i, p. 183. | 1894 C, p. 337. |
| Gadow, H. 1891 A, pl. lvii, fig. 17. | 1894 D, p. 161. |
| Huxley, T. H. 1867 A, p. 438, fig. 20. | Zittel, K. A. 1890 A, p. 842. |
| Magnus, H. 1869 A. | Pelecanus erythrorhynchus ? Gmel. |
| Mivart, St. G. 1878 A. | Coues, F. 1884 A, p. 722. (P. trachyrhynchus.) |
| Owen, R. 1856 F, p. 212. | Shufeldt, R. W. 1891 B, p. 818. |
| Pycraft, W. P. 1898 A, pp. 84, 98. | 1892 D, p. 401. |
| Seeböhm, H. 1889 A. | Recent; North America: Pleistocene; Oregon. |
| Selenka, E. 1869 A, pl. viii, fig. 7. | |

CYPHORNIS Cope. Type *C. magnus* Cope.

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| <i>Cope</i> , E. D. 1894 G. | Cyphornis magnus Cope. |
| The position of this genus is in doubt | <i>Cope</i> , E. D. 1894 G, p. 451, pl. xx, figs. 11-14. |
| | Eocene ? ; Vancouvers Island. |

SULIDÆ.

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|---|---------------------------------|
| Coues, E. 1884 A, p. 720. | Seeböhm, H. 1889 A. |
| Fürbringer, M. 1888 A, p. 1172. (Sulinæ.) | Selenka, E. 1869 A. |
| Gadow, H. 1891 A. | Shufeldt, R. W. 1888 E, p. 287. |
| Pycraft, W. P. 1898 A, p. 92. | Stejneger, L. 1885 A, p. 188. |
| Reichenow, A. 1871 A. | Zittel, K. A. 1890 A, p. 842. |

SULA Brisson. Type *S. bassana* (Linn.).

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| Brandt, J. F. 1840 A, p. 139. | Shufeldt, R. W. 1888 E, p. 287, figs. 24-38. |
| Coues, E. 1884 A, p. 720. | 1894 B. |
| Edwards, A. M. 1868 A. | Sula loxostyla Cope. |
| Gadow, H. 1891 A. | <i>Cope</i> , E. D. 1869 M (1870), p. 236, fig. 53. |
| Mivart, St. G. 1878 A. | Coues, E. 1872 B, p. 349. |
| Parker, W. K. 1868 A, p. 150. | 1884 A, p. 824. |
| Pycraft, W. P. 1898 A, p. 82. | Miocene; North Carolina. |
| Seeböhm, H. 1889 A. | |
| Selenka, E. 1869 A, pl. viii, fig. 8. | |

PHALACROCORACIDÆ.

- Coues, E. 1884 A, p. 723.
 Fürbringer, M. 1888 A, p. 1172. (Phalacrocoracinae.)
 Gadow, H. 1891 A.
 Pycraft, W. P. 1898 A, p. 92. (Phalacrocoracinae.)
 Reichenow, A. 1871 A.

- Seebohm, H. 1889 A.
 Selenka, E. 1869 A.
 Shufeldt, R. W. 1888 E, p. 310.
 1894 C, p. 337.
 Stejneger, L. 1885 A, p. 190.
 Zittel, K. A. 1890 A, p. 842.

PHALACROCORAX Brisson. Type *Pelecanus carbo* Linn.

- Coues, E. 1884 A, p. 726.
 Edwards, A. M. 1868 A, p. 186.
 Gadow, H. 1891 A.
 Huxley, T. H. 1867 A, p. 439, fig. 21.
 Jeffries, J. A. 1883 A.
 1883 B.
 1884 A.
 Parker, W. K. 1868 A, p. 149.
 Pycraft, W. P. 1898 A, p. 83.
 Seebohm, H. 1889 A.
 Selenka, E. 1869 A, pl. viii, fig. 5.
 Shufeldt, R. W. 1883 B.
 1888 E, p. 309, fig. 39.
 1894 D, p. 161.
 Zittel, K. A. 1890 A, p. 842.

Phalacrocorax idahensis Marsh.

- Marsh, O. C. 1870 A, p. 216. (Graculus.)
 Cope, E. D. 1869 M (1870), p. 237. (Graculus.)
 Coues, E. 1872 B, p. 349. (Graculus.)
 1884 A, p. 824.

- King, C. 1878 A, p. 443. (G. idahoensis.)
 Zittel, K. A. 1890 A, p. 842. (P. idahoensis.)
 Pleistocene; Idaho.

Phalacrocorax macropus Cope.

- Cope, E. D. 1878 H, p. 386. (Graculus.)
 1889 F. (Graculus.)
 1889 S, p. 980. (Graculus.)
 Coues, E. 1884 A, p. 824.
 Shufeldt, R. W. 1891 B, p. 818.
 1892 D, p. 399, pl. xv, figs. 6-9.
 Pleistocene; Oregon.

Phalacrocorax perspicillatus Pallas.

- Coues, E. 1884 A, p. 728.
 Lucas, F. A. 1890 B, p. 88, pls. ii-iv.
 1896 A.
 Stejneger, L. 1885 A, p. 191, fig. 92.
 Stejneger and Lucas 1890 A, pls. ii-iv.
 Recently extinct; Bering Island.

GRACULAVUS Marsh. Type *G. velox* Marsh.

- Marsh, O. C. 1872 E, p. 363.
 Fürbringer M. 1888 A, p. 1168.
 Stejneger, L. 1885 A, p. 30.
 Zittel, K. A. 1890 A, p. 840.

The systematic position of this genus is doubtful.

Graculavus pumilis Marsh.

- Marsh, O. C. 1872 E, p. 364.
 Coues, E. 1872 B, p. 350.
 1884 A, p. 826.

- Marsh, O. C. 1873 D, p. 229.
 1880 G, p. 195.
 Cretaceous; New Jersey.

Graculavus velox Marsh.

- Marsh, O. C. 1872 E, p. 363.
 Coues, E. 1872 B, p. 349.
 1884 A, p. 826.
 Marsh, O. C. 1873 D, p. 229.
 1880 G, p. 194.
 Cretaceous; New Jersey.

Order GALLINÆ.

- Blanchard, É. 1857 A. (Gallidæ.)
 Cope, E. D. 1898 B, p. 89.
 Coues, E. 1884 A, p. 571.
 Edwards, A. M. 1871 A, p. 161. ("Gallinacés.")
 Fürbringer, M. 1888 A, p. 1255. (Gallidæ.)
 Gadow, H. 1891 A.
 1898 A, p. 33. (Galliformes.)
 Huxley, T. H. 1867 A, p. 459. (Alectoromorphæ.)
 1872 A, p. 234. (Alectoromorphæ.)

- Mivart, St. G. 1892 A, p. 274. (Galliformes.)
 Owen, R. 1856 F, p. 8.
 1866 B. (Rasores.)
 Parker, W. K. 1866 B.
 1868 A, p. 182.
 1870 A.
 Selenka, E. 1869 A. (Rasores.)
 Shufeldt, R. W. 1888 C. (On Gallus.)
 Zittel, K. A. 1890 A, p. 847. (Galliformes.)

Suborder ALECTOROPODES.

- Coues, E. 1884 A, p. 573.
 Gadow, H. 1898 A, p. 34. (Galli.)

- Haeckel, E. 1895 A, p. 415. (Alectornithes.)

TETRAONIDÆ.

Coues, E. 1884 A, p. 576.

Gadow, H. 1891 A.

Huxley, T. H. 1867 A, p. 432, figs. 14. (Tetrao.)

Parker, W. K. 1866 B.

Selenka, E. 1869 A.

Shufeldt, R. W. 1881 B.

TYPANUCHUS Gloger. Type *Tetrao cupido* Linn.

Coues, E. 1884 A, p. 583. (Cupidonia.)

Shufeldt, R. W. 1881 B, pls. x-xii. (Cupidonia.)

Tympanuchus pallidicinctus Ridgw.Coues, E. 1884 A, p. 584. (Cupidonia *cupido* pallidicincta.)

Shufeldt, R. W. 1891 B, p. 820.

1892 D, p. 413.

Recent; Great Plains: Pleistocene; Oregon.

PEDIOCÆTES Baird. Type *Tetrao phasianellus* Linn.

Coues, E. 1884 A, p. 581. (Pediocetes.)

Pediocætes lucasii Shufeldt.

Shufeldt, R. W. 1892 D, p. 414, pl. xvii, fig. 30.

1891 B, p. 820. (Name; no description.)

Pleistocene; Oregon.

Pediocætes nanus Shufeldt.

Shufeldt, R. W. 1892 D, p. 414, pl. xvii, fig. 37.

1891 B, p. 820. (Name; no description.)

Pleistocene; Oregon.

Pediocætes phasianellus (Linn.).

Coues E. 1884 A, p. 581.

Shufeldt, R. W. 1891 B, p. 820. (P. p. columbianus.)

1892 D, p. 414. (P. p. columbianus.)

Recent; western and northern America: Pleistocene; Oregon.

PALÆOTETRIX Shufeldt. Type *P. gillii* Shufeldt.

Shufeldt, R. W. 1892 D, p. 415.

1891 B, p. 820.

Palæotetrix gillii Shufeldt.

Shufeldt, R. W. 1892 D, p. 415, pl. xvii, fig. 34.

1891 B, p. 820.

Pleistocene; Oregon.

PHASIANIDÆ.

Coues, E. 1884 A, p. 576. (>Meleagrididæ.)

Fürbringer, M. 1888 A, p. 1255. (Meleagrinae.)

Gadow, H. 1891 A.

Huxley, T. H. 1867 A, p. 432.

Mivart, St. G. 1892 A, p. 275.

Reichenow, A. 1871 A.

Selenka, E. 1869 A.

MELEAGRIS Linn. Type *M. gallopavo* Linn.

Linnæus, C., 1758, Syst. Nat., ed. x, p. 88.

Cope, E. D. 1869 M (1870), p. 238.

Coues, E. 1884 A, p. 576.

Edwards, A. M. 1871 A, p. 171.

Meleagris antiquus Marsh.

Marsh, O. C. 1871 E, p. 126.

Coues, E. 1872 B, p. 347.

1884 A, p. 823.

King, C. 1878 A, p. 412.

Marsh, O. C. 1897 C, p. 527.

Shufeldt, R. W. 1897 A, p. 648.

Oligocene (White River); Colorado.

Meleagris celer Marsh.

Marsh, O. C. 1872 J, p. 261.

Coues, E. 1872 B, p. 348.

1884 A, p. 823.

Shufeldt, R. W. 1897 A, p. 649.

Pleistocene; New Jersey.

Meleagris superbus Cope.

Cope, E. D. 1869 M (1870), p. 229 (M. superbus); p. ii (M. altus).

Amer. Jour. Science 1871 A.

Cope, E. D. 1873 X, p. 298. (M. altus.)

Coues, E. 1872 B, p. 348. (M. altus.)

1884 A, p. 823. (M. altus.)

Marsh, O. C. 1870 H, p. 317. (M. altus; no description.)

1870 I, p. 11. (No description.)

1872 J, p. 260. (M. altus.)

1873 P, p. ix. (M. altus.)

Shufeldt, R. W. 1897 A, p. 648. (M. altus.)

Pleistocene; New Jersey.

Meleagris sp. indet.

Wheatley, C. M. 1871 A.

Meleagris gallopavo has been reported by Dr. Leidy (1889 H, p. 6) from a cave in Pennsylvania. The great majority of species accompanying it live yet in the vicinity.

GALLINULOIDIDÆ.

Lucas F. A. 1900 B, p. 84.

GALLINULOIDES. Type *G. wyomingensis* Eastman.

Eastman, C. R. 1900 E, p. 54.

Lucas, F. A., 1900 B, p. 79.

Gallinuloides wyomingensis Eastman.

Eastman, C. R. 1900 E, p. 54, pl. iv.

Lucas, F. A., 1900 B, p. 79, pl. i.

Eocene (Bridger, Green River shales); Wyoming.

Order RAPTORES.

Cope, E. D. 1898 B, p. 88. (Accipitres.)

Coues, E. 1884 A, p. 496.

Edwards, A. M. 1871 A, p. 406.

Fürbringer, M. 1888 A, p. 1294 (Accipitres); p. 1306 (Strigidae).

Gadow, H. 1891 A.

1898 A, p. 33. (Falciformes.)

Giebel, C. G. 1866 A, p. 25. (Rapaces.)

Huxley, T. H. 1867 A, p. 462. (Aëtomorpha.)

Huxley, T. H. 1872 A, p. 234. (Aëtomorpha.)

Magnus, H. 1869 A.

Mivart, St. G. 1892 A, p. 270.

Newton, A. 1868 A. (Aëtomorpha.)

Owen, R. 1856 F, p. 206.

1866 B.

Reichenow, A. 1871 A.

Selenka, E. 1869 A.

Suborder CATHARTIDES Coues.

Coues, E. 1884 A, p. 557.

Gadow, H. 1898 A, p. 33. (Cathartes.)

Mivart, St. G. 1892 A, p. 271. (Cathartes.)

CATHARTIDÆ.

Coues, E. 1884 A, p. 557.

Edwards, A. M. 1871 A, p. 406.

Fürbringer, M. 1888 A, p. 1294.

Huxley, T. H. 1867 A, p. 463.

Newton, A. 1868 A.

Reichenow, A. 1871 A.

Shufeldt, R. W. 1883 C.

PALÆOBORUS Coues. Type *Cathartes umbrosus* Cope.

Coues, E. 1884 A, p. 822.

Gadow, H. 1891 A, pl. xii, figs. 7, 8. (Cathartes.)

Huxley, T. H. 1867 A, p. 441, fig. 22. (Cathartes.)

Palæoborus umbrosus (Cope.)

Cope, E. D. 1874 I, p. 151. (Cathartes.)

1874 O, p. 18. (Cathartes.)

Cope, E. D. 1875 F, p. 73. (Vultur.)

1875 S. (Vultur.)

1877 K, p. 287, pls. lxvii, figs. 10-18; pl. lxviii.

(Vultur.)

Coues, E. 1884 A, p. 822.

Shufeldt, R. W. 1883 C. (Cathartes.)

Pliocene; New Mexico.

Suborder ACCIPITRES.

Blanchard, É. 1859 A.

Coues, E. 1884 A, p. 517.

Edwards, A. M. 1871 A, p. 406. (A. diurni.)

Fürbringer, M. 1888 A, p. 1294.

Gadow, H. 1891 A.

1898 A, p. 33.

Huxley, T. H. 1867 A, p. 462. (Gyapætidæ.)

Mivart, St. G. 1892 A, p. 270. (Falcones.)

Parker, W. K. 1868 A, p. 166. (Accipitrinæ.)

Selenka, E. 1869 A.

Zittel, K. A. 1890 A, p. 842.

FALCONIDÆ.

Blanchard, É. 1859 A. (Falco.)

Coues, E. 1884 A, p. 519.

Gadow, H. 1891 A.

Parker, W. K. 1873 A, p. 45.

Selenka, E. 1869 A.

Shufeldt, R. W. 1881 A.

AQUILA Brisson. Type *Falco chrysaetos* Linn.

- Blanchard, É. 1859 A, p. 36.
 Coues, E. 1884 A, p. 553.
 Nicholson and Lydekker 1889 A, p. 1214, fig. 1106.
 Selenka, E. 1869 A, pl. xii, figs. 12-16; pl. xvi, figs. 5, 6; pl. xvii, fig. 13.

Aquila danana Marsh.

- Marsh, O. C. 1871 E, p. 125.
 Coues, E. 1872 B, p. 346.
 1884 A, p. 822.

- King, C. 1878 A, p. 430.
 Pliocene?; Nebraska.

Aquila pliogryps Shufeldt.

- Shufeldt, R. W. 1892 D, p. 416, pl. xvii, fig. 33.
 1891 B, p. 820.
 Pleistocene; Oregon.

Aquila sodalis Shufeldt.

- Shufeldt, R. W. 1892 D, p. 417, pl. xv, fig. 5.
 1891 B, p. 820.
 Pleistocene; Oregon.

Suborder STRIGES.

- Coues, E. 1884 A, p. 498.
 Edwards, A. M. 1871 A, p. 474. (Strigides.)
 Fürbringer, M. 1888 A, p. 1306. (Strigidæ.)
 Gadow, H. 1898 A, p. 36.

- Mivart, St. G. 1892 A, p. 271.
 Parker, W. K. 1868 A, p. 166. (Striginæ.)
 Shufeldt, R. W. 1881 D. (On Speotyto.)

STRIGIDÆ.

- Blanchard, É. 1859 A, p. 60. (Strix.)
 Coues, E. 1884 A, p. 502.
 Fürbringer, M. 1888 A, p. 1306.
 Gadow, H. 1891 A.

- Huxley, T. H. 1867 A, p. 462.
 Newton, A. 1868 A.
 Selenka, E. 1869 A.
 Shufeldt, R. W. 1881 D. (On Speotyto.)

BUBO Duméril. Type *Strix bubo* Linn.

- Blanchard, É. 1859 A, p. 63.
 Coues, E. 1884 A, p. 503.
 Fürbringer, M. 1888 A, p. 1306.

Bubo leptosteus Marsh.

- Marsh, O. C. 1871 E, p. 126.
 Coues, E. 1872 B, p. 347.
 1884 A, p. 822.
 King, C. 1878 A, p. 404.

- Leidy, J. 1872 B, p. 365.
 Nicholson and Lydekker 1889 A, p. 1241.
 Eocene (Bridger); Wyoming.

Bubo virginianus (Gmel.).

- Coues, E. 1884 A, p. 503.
 Shufeldt, R. W. 1891 B, p. 819.
 1892 D, p. 418.
 Recent; North America: Pleistocene; Oregon.

Order PICARIÆ.

- Blanchard, É. 1859 A, p. 126.
 Coues, E. 1884 A, p. 444.
 Fürbringer, M. 1888 A.
 Gadow, H. 1891 A.
 Huxley, T. H. 1867 A, p. 467. (Celeomorphæ.)
 1872 A, p. 234. (Celeomorphæ.)

- Mivart, St. G. 1892 A, p. 266. (Piciformes.)
 Owen, R. 1856 F, p. 207. (Scansores.)
 Parker, W. K. 1868 A, p. 169.
 Selenka, E. 1869 A.
 Stejneger, L. 1885 A, p. 368.

UINTORNIS Marsh. Type *U. lucaris* Marsh.

- Marsh, O. C. 1872 J, p. 259.
 Zittel, K. A. 1890 A, p. 850.
 The position of this genus is in doubt.

Uintornis lucaris Marsh.

- Marsh, O. C. 1872 J, p. 259.

- Allen, J. A. 1878 A, p. 445.
 Coues, E. 1872 B, p. 347.
 1884 A, p. 822.
 King, C. 1878 A, p. 404.
 Eocene (Bridger); Wyoming

Order PASSERES.

- Blanchard, É. 1859 A, p. 85.
 Cope, E. D. 1898 B, p. 90.
 Coues, E. 1884 A, p. 238.
 Edwards, A. M. 1871 A, p. 296.

- Fürbringer, M. 1888 A, p. 1405.
 Gadow, H. 1891 A.
 1898 A, p. 37. (Passeriformes.)
 Garrod, A. N. 1876 A.

Giebel, C. G. 1866 A, p. 24.
 Haeckel, E. 1895 A, p. 415. (Coracornithes.)
 Huxley, T. H. 1867 A, p. 469. (Coracomorphæ.)
 Lydekker, R. 1891 A, p. 2.
 Mivart, St. G. 1892 A, p. 260.
 Owen, R. 1856 F, p. 207. (Insessores.)
 Parker, W. K. 1868 A, p. 178. (Passerinæ.)

Parker, W. K. 1875 B.
 1878 B.
 Selenka, E. 1869 A.
 Shufeldt, R. W. 1881 C. (On *Lanius*.)
 1881 D. (On *Eremophilus*.)
 Stejneger, L. 1885 A, p. 458.

CORVIDÆ.

Coues, E. 1884 A, p. 414.
 Gadow, H. 1891 A.

Parker, W. K. 1872 A.
 Shufeldt, R. W. 1888 D.

CORVUS Linn. Type *C. corax* Linn.

Coues, E. 1884 A, p. 415.
 Edwards, A. M. 1871 A, p. 302.
 Gadow, H. 1891 A, pl. lvii, figs. 9, 47.
 Huxley, T. H. 1867 A, p. 451, fig. 32.
 Parker, W. K. 1872 A.
 Shufeldt, R. W. 1888 D, pl. xv, fig. 1.

Corvus annectens Shufeldt.

Shufeldt, R. W. 1892 D, p. 419, pl. xv, figs. 14-16.
 1891 B, p. 820. (No description.)
 Pleistocene; Oregon.

ICTERIDÆ.

Coues, E. 1884 A, p. 399.
 Shufeldt, R. W. 1888 D.

Stejneger, L. 1885 A, p. 544.

SCOLECOPHAGUS Swainson. Type *Turdus carolinus* Müll.

Coues, E. 1884 A, p. 411.
 Shufeldt, R. W. 1888 D.

Scolecophagus affinis Shufeldt.

Shufeldt, R. W. 1892 D, p. 418, pl. xv, fig. 10.
 1891 B, p. 820. (No description.)
 Pleistocene; Oregon.

FRINGILLIDÆ.

Coues, E. 1884 A, p. 339.

Stejneger, L. 1885 A, p. 545.

PALÆOSPIZA Allen. Type *P. bella* Allen.

Allen, J. A. 1878 A.
 The relationships of this genus are in doubt.

Palæospiza bella Allen.

Allen, J. A. 1878 A, pl. i, figs. 1, 2.

Cope, E. D. 1881 M.
 Coues, E. 1884 A, p. 822.
 Eocene ? (Amyzon shales); Colorado.

CIMOLOPTERYX Marsh. Type *C. rarus* Marsh.

Marsh, O. C. 1892 G, p. 175.
 1889 D, p. 83. (No description.)
 A genus of unknown position among birds.

Cimolopteryx rarus Marsh.

Marsh, O. C. 1892 G, p. 175, pl. iii, fig. 2.
 1889 D, p. 83. (No description.)

Cimolopteryx retusus Marsh.

Marsh, O. C. 1892 G, p. 175.
 Cretaceous (Laramie); Wyoming.

PALÆONORNIS STRUTHIONOIDES Emmons.

Emmons, E. 1857 A, p. 148, fig. 114.
 Triassic ?; North Carolina.
 A fossil of doubtful relationships.

FOSSIL EGG.

Farrington, O. C. 1891 A, pp. 193-260, pls. xx, xxi.
 Miocene; South Dakota.

ICHNITES.

The imprints of the feet of animals on the rocks have been described under various general names, such as *Ichnites*, *Ornithites*, *Ornichichnites*, *Ornithoidichnites*, *Sauroidichnites*, *Batrachoidichnites*. The first attempt to place under generic names the various forms found in North America was made by President Edward Hitchcock in 1845 (Hitchcock, E. 1845 B). This communication the present writer has made the basis for both the generic and the specific names. Many of the names, both generic and specific, were afterwards changed; but this was done in violation of the rules of nomenclature as now recognized. On account of the impossibility of determining with certainty the systematic positions of the animals which made the tracks described, the "genera" are arranged alphabetically.

Bouvé, T. T. 1859 B.

Cope, E. D. 1867 D.

Deane, J. 1844 A.

1844 B.

1844 C.

1845 A.

1845 B.

1845 C.

1845 D.

Edwards, A. Milne 1869 A.

Field, R. 1860 A.

1860 B.

1860 C.

Giebel, C. G. 1847 B, p. 34.

Hitchcock, C. H. 1855 A.

1869 A.

1871 A.

1889 A.

1889 B.

Hitchcock, E. 1836 A.

1837 A.

1837 B.

1841 A.

1843 A.

1844 A.

Hitchcock, E. 1844 B.

1845 A.

1845 B.

1847 A.

1848 A.

1858 A.

1861 A.

1863 A.

1865 A.

Lyell, C. 1842 A.

1843 A.

1846 B.

Marsh, D. 1848 A.

Mitchell, J. 1895 A.

Mudge, B. F. 1866 A.

1874 A.

Pictet, F. J. 1853 A, p. 406.

Quenstedt, F. A. 1852 A, p. 81.

Rogers, H. D. 1842 A.

Sickler, F. K. L. 1835 A.

Silliman, B. 1837 A.

Snow, F. H. 1887 A.

Voigt, F. S. 1835 A.

Zittel, K. A. 1890 A, p. 411.

ALLOPUS Marsh. Type *A. littoralis* Marsh.

Marsh, O. C. 1894 D, p. 83.

Allopus littoralis Marsh.

Marsh, O. C. 1894 D, p. 83.

1894 I, pl. xi, figs. 4, 4a.

Miller, S. A. 1897 A, p. 793.

Coal-measures; Kansas.

AMBLYPUS E. Hitch. Type *A. dextratus* E. Hitch.

Hitchcock, E. 1858 A, p. 143.

Amblypus dextratus E. Hitch.

Hitchcock, E. 1858 A, p. 143, pl. xxv, fig. 7; pl. xlviii, fig. 5.

Hitchcock, C. H. 1889 B, p. 119.

Triassic; Massachusetts.

ANCYROPUS E. Hitch. Type *Sauroidichnites heteroclitus* E. Hitch.

Hitchcock, E. 1845 B, p. 24.

1848 A, p. 242.

1858 A, p. 138.

Ancyropus heteroclitus E. Hitch.

Hitchcock E. 1845 B, p. 24 (*A. heteroclitus*, *A. jacksonianus*.)

Hitchcock, C. H. 1889 B, p. 119.

Hitchcock, E. 1841 A, p. 479, pl. xxx, fig. 2 (*Sauroidichnites heteroclitus*); fig. 3 (*Saur. jacksonii*).

1848 A, p. 243, pl. xv, figs. 3-5.

1858 A, p. 139, pl. xxv, figs. 3, 4; pl. liii, figs. 1, 2.

Triassic; Connecticut.

ANOMÆPUS E. Hitch. Type *A. scambus* E. Hitch.*Hitchcock, E.* 1848 A, p. 220.*Hitchcock, C. H.* 1889 A.
1889 B.*Hitchcock, E.* 1858 A, p. 55.

1861 A, p. 150.

1863 A, p. 48.

1865 A, p. 31.

Lydekker, R. 1890 A, p. 221.*Warren, J. C.* 1854 A, p. 35.**Anomæpus? culbertsonii** (King.)*King, A. F.* 1844 A, p. 176, figure. (Ornithichnites.)

1845 A, fig. 2. (Ornithichnites.)

1845 C, p. 216, fig. 4. (Ornithichnites.)

Lyell, C. 1846 A, p. 25. (No name.)

Coal-measures; Pennsylvania.

Assigned to this genus provisionally.

Anomæpus cuneatus C. H. Hitch.*Hitchcock, C. H.* 1889 B, pp. 118, 125.

Triassic; Massachusetts.

Anomæpus curvatus E. Hitch.*Hitchcock, E.* 1863 A, p. 48, fig. 1.

1863 B, p. 86. (Apatichnus curvatus.)

1865 A, p. 5, pl. i, fig. 2; pl. xv, fig. 2.

1889 B, p. 118.

Lydekker, R. 1890 A, p. 221.

Triassic; Connecticut.

Anomæpus? gallinuloides (King.)*King, A. F.* 1844 A, p. 176, figure. (Ornithichnites.)

1845 A, fig. 1. (Ornithoidichnites.)

Lyell, C. 1846 A, p. 25. (No name.)

Coal-measures; Pennsylvania.

This track is assigned to *Anomæpus* only provisionally.**Anomæpus gracillimus** (E. Hitch.)*Hitchcock, E.* 1845 B, p. 23. (Eubrontes.)*Deane, J.* 1861 A, p. 36, pl. iv, figs. 2, 4. (Grallator.)*Hitchcock, C. H.* 1865 A, p. 6. (Anomæpus.)

1889 B, pp. 118, 123.

Hitchcock, E. 1844 A, p. 305, pl. iii, fig. 4. (Ornithoidichnites.)

1848 A, p. 175, pl. ii, fig. 3. (Brontozoum.)

1858 A, p. 73, pl. xiii, fig. 5; pl. xxxix, fig. 2.

(Grallator.)

1865 A, p. 6. (Anomæpus.)

Lydekker, R. 1890 A, p. 221.*Mantell, G. A.* 1846 A, p. 38. (Ornithichnites.)*Warren, J. C.* 1854 A, p. 27. (Brontozoum.)

Triassic; Massachusetts, Pennsylvania.

Anomæpus intermedius E. Hitch.*Hitchcock, E.* 1865 A, pp. 2, 7, pl. i, fig. 1; pl. xv, fig. 1.*Hitchcock, C. H.* 1889 B, p. 118.*Hitchcock, E.* 1863 A, pp. 49, 53. (No description.)

1863 B, pp. 85, 86. (Name only.)

Lydekker, R. 1890 A, p. 221.

Triassic; Massachusetts, Connecticut.

This species is based on part of *Brontozoum isodactylum* Edw. Hitchcock, 1858 A, p. 69. See under *Plesiornis minor*.**Anomæpus isodactylus** C. H. Hitch.*Hitchcock, C. H.* 1889 B, pp. 118, 124.

Triassic; Massachusetts.

Anomæpus major E. Hitch.*Hitchcock, E.* 1858 A, p. 56, pl. viii.*Deane, J.* 1861 A, p. 48, pl. xxxi.*Eyermann, J.* 1866 A, p. 32.*Hitchcock, C. H.* 1871 A, p. xxi, fig. 2.

1873 A, p. 433, fig. 1.

1889 B, p. 118.

Woodworth, J. B. 1895 A.

Triassic; Massachusetts, New Jersey.

Anomæpus minimus E. Hitch.*Hitchcock, E.* 1865 A, p. 5, pl. ii, figs. 1, 2.*Hitchcock, C. H.* 1889 B, p. 118.*Hitchcock, E.* 1863 B, p. 85. (Name only.)

Triassic; Massachusetts.

Anomæpus scambus E. Hitch.*Hitchcock, E.* 1848 A, p. 222, pl. xiii, figs. 1-6.*Dana, J. D.* 1896 A, p. 752, fig. 1175.*Deane, J.* 1845 C, p. 80, figs. A, B. (No name.)

1847 A, p. 78, fig. 3. (No name.)

1861 A, p. 48, pl. xxxii. (A. minor.)

Eyermann, J. 1889 A, p. 32. (A. minor.)*Hitchcock, C. H.* 1855 A, p. 394.

1889 B, p. 118. (A. minor.)

Hitchcock, E. 1858 A, p. 57, pl. ix, figs. 1, 2; pl.

xxxiv, fig. 2. (A. minor.)

Triassic; Massachusetts, New Jersey.

ANTHRACOPUS Leidy. Type *A. ellangowensis* Leidy.*Leidy, J.* 1879 B, p. 164.**Anthracopus ellangowensis** Leidy.*Leidy, J.* 1879 B, p. 164.*Mason, W. D. H.* 1878 A, pp. 717, 725. (No name.)

Coal-measures; Pennsylvania.

ANTICHEIROPUS E. Hitch. Type, no species indicated.

Hitchcock, E. 1865 A, p. 10.**Anticheiropus hamatus** E. Hitch.*Hitchcock, E.* 1865 A, p. 10, pl. ix, figs. 1, 2.*Hitchcock, C. H.* 1889 B, p. 118.

Triassic; Massachusetts.

Anticheiropus pilulatus E. Hitch.*Hitchcock, E.* 1865 A, p. 10, pl. ix, fig. 3.*Hitchcock, C. H.* 1889 B, p. 118.

Triassic; Massachusetts.

ANTIPUS E. Hitch. Type *A. flexiloquus* E. Hitch.

Hitchcock, E. 1858 A, p. 115.

Antipus bifidus E. Hitch.

Hitchcock, E. 1858 A, p. 116, pl. xxxvi, fig. 8; pl. xlviii, fig. 10.

Hitchcock, C. H. 1889 B, p. 119.
Triassic; Massachusetts.

Antipus flexiloquus E. Hitch.

Hitchcock, E. 1858 A, p. 115, pl. xx, fig. 10.

Hitchcock, C. H. 1889 B, p. 119.
Triassic; Massachusetts.

APATICHNUS E. Hitch. Type *A. circumagens* E. Hitch.

Hitchcock, E. 1858 A, p. 99.
1861 A, p. 150.

Apatichnus bellus E. Hitch.

Hitchcock, E. 1858 A, p. 101, pl. xvii, fig. 6; pl. xxxv, fig. 8; pl. xlv, fig. 6.

Dana, J. D. 1896 A, p. 752, fig. 1174.

Hitchcock, C. H. 1889 B, p. 118.
Triassic; Massachusetts.

Apatichnus circumagens E. Hitch.

Hitchcock, E. 1858 A, p. 100, pl. xvii, fig. 5; pl. xxxv, fig. 6.

Deane, J. 1861 A, p. 37, pl. vi, fig. 1; pl. xix; pl. xxxiv, fig. 1, 2.

Hitchcock, C. H. 1889 B, p. 118.
Triassic; Massachusetts.

Apatichnus crassus C. H. Hitch.

Hitchcock, C. H. 1889 B, pp. 118, 122, 124.
Triassic; New Jersey.

Apatichnus holyokensis C. H. Hitch.

Hitchcock, C. H. 1889 B, pp. 118, 123, 124.
Triassic; Massachusetts.

ARACHNICHNUS E. Hitch. Type *A. dehiscens* E. Hitch.

Hitchcock, E. 1858 A, p. 117.

Arachnichnus dehiscens E. Hitch.

Hitchcock, E. 1858 A, p. 117, pl. xx, figs. 12, 13; pl. xxxvii, fig. 2.

Hitchcock, C. H. 1889 B, p. 119.
Triassic; Massachusetts.

ARGOIDES E. Hitch. No type; *A. isodactylatus* may be taken.

Hitchcock, E. 1845 B, p. 24.
1848 A, p. 184. (Argozoum.)
1858 A, p. 81. (Argozoum.)

Argoides isodactylatus E. Hitch.

Hitchcock, E. 1845 B, p. 24.
Adams, C. B. 1846 A, p. 215. (Argoides minimus?)
Hitchcock, C. H. 1889 B, p. 118. (Argozoum paridigitatum.)

Hitchcock, E. 1836 A, p. 325, fig. 9. (Ornithichnites minimus.)

1837 A, p. 175. (Ornithichnites minimus.)
1841 A, p. 496, pl. xlv, figs. 38, 39. (Ornithoidichnites isodactylus.)
1848 A, p. 187, pl. vi, figs. 4, 5. (Argozoum paridigitatum.)
1858 A, p. 82, pl. xiv, fig. 3; pl. xxxv, fig. 4; pl. xxxix, fig. 1. (Argozoum paridigitatum.)

Warren, J. C. 1854 A, p. 29. (Argozoum paridigitatum.)
Triassic; Massachusetts, Connecticut.

Argoides macrodactylatus (E. Hitch.).

Hitchcock, E. 1845 B, p. 25. (Platypterna.)
Hitchcock, C. H. 1889 B, p. 118. (Argozoum disparidigitatum.)
Hitchcock, E. 1841 A, p. 494, pl. xliii, fig. 35. (Ornithoidichnites.)

Hitchcock, E. 1848 A, p. 186, pl. vi, fig. 3. (Argozoum disparidigitatum.)

1858 A, p. 82, pl. xiv, fig. 2. (Argozoum disparidigitatum.)

arren, J. C. 1854 A, p. 29. (Argozoum disparidigitatum.)

Triassic; Massachusetts, Connecticut, New Jersey.

Argoides redfieldianus E. Hitch.

Hitchcock, E. 1845 B, p. 24.

Hitchcock, C. H. 1889 B, p. 118. (Argozoum.)

Hitchcock, E. 1844 A, p. 304, pl. iii, fig. 1. (Ornithoidichnites redfieldii.)

1848 A, p. 185. (Argozoum.)

1858 A, p. 81, pl. xiv, fig. 1. (Argozoum.)

1863 B, p. 85. (Argozoum redfieldianum, doubtful species.)

1865 A, p. 2. (Argozoum.)

Triassic; Massachusetts.

Argoides robustus E. Hitch.

Hitchcock, E. 1845 B, p. 24.

Giebel, C. G. 1847 B, p. 36. (Ornithichnites robustus.)

Hitchcock, E. 1836 A, p. 319, fig. 3. (Ornithichnites ingens minor.)

1837 B, p. 175. (O. robustus.)

Triassic; Massachusetts.

BAROPUS Marsh. Type *B. lentus* Marsh.

Marsh, O. C. 1894 D, p. 83.

Baropus lentus Marsh.

Marsh, O. C. 1894 D, p. 83, pl. ii, fig. 5.

Dana, J. D. 1896 A, p. 684, fig. 1116.

Marsh, O. C. 1894 I, p. 338, pl. xi, fig. 5.

1895 C, p. 492, fig. 11.

Miller, S. A. 1897 A, p. 793.

Coal-measures; Kansas.

BATRACHICHNUS Woodworth. Type *B. plainvillensis* Woodworth.

Woodworth, J. B. 1900 A, p. 453.

Batrachichnus plainvillensis Woodworth.

Woodworth, J. B. 1900 A, p. 453, pl. xl; text-fig. 1.
Carboniferous; Massachusetts.

BATRACHOIDES E. Hitch. Type *Batrachoides nidificans* E. Hitch.

Hitchcock, E. 1858 A, p. 121.

Hitchcock, C. H. 1871 A, p. xxi.

1873 A, p. 436.

Shepard, C. U. 1867 A.

The name *Batrachoides* is preoccupied by Lacépède for a genus of fishes.

Batrachoides nidificans E. Hitch.

Hitchcock, E. 1858 A, p. 122, pl. xxi, fig. 5; pl. 1, figs. 1-4.

Hitchcock, C. H. 1889 B, p. 119.

Shepard, C. U. 1867 A.

Triassic; Massachusetts.

Batrachoides antiquior described in Hitchcock, E. 1858 A, p. 123, pl. xxi, fig. 6; pl. 1, fig. 2, was rejected in 1865. (Hitchcock C. H. 1865 A, p. 2.) It is regarded as wholly of inorganic origin.

BATRACHOPUS E. Hitch. Type *B. deweyanus* E. Hitch.

Hitchcock, E. 1845 B, p. 25.

Hitchcock, C. H. 1871 A, p. xxi. (*Anisichnus*, to replace *Anisopus* preoccupied.)

Hitchcock, E. 1848 A, p. 226. (*Anisopus*.)

1858 A, pp. 60, 61. (*Anisopus*.)

Zittel, K. A. 1890, p. 411.

Batrachopus deweyanus E. Hitch.

Hitchcock, E. 1845 B, p. 25.

Dana, J. D. 1896 A, p. 751, fig. 1171. (*Anisopus*.)

Deane, J. 1845 A, p. 161, figure. (*Batrachoidichnites deweyi*.)

1861 A, p. 46, pl. xxv, fig. 2; pl. xxvi, fig. 2. (*Anisopus*.)

Hitchcock, C. H. 1855 A, p. 394. (*Anisopus*.)
1889 B, p. 119. (*Anisichnus*.)

Hitchcock, E. 1841 A, p. 489, pl. xxxix, fig. 26; pl. xlviii, fig. 44. (*Ornithoidichnites parvulus*.)

1843 A, p. 261, pl. xi, fig. 9. (*Sauroidichnites deweyi*.)

1844 A, p. 305. (*Batrachoidichnites parvulus*, B. deweyi.)

1848 A, p. 226, pl. xvi, figs. 5, 6. (*Anisopus*.)

Hitchcock, E. 1858 A, p. 60, pl. ix, fig. 3; pl. xli, fig. 2; pl. xlii, figs. 1, 2; pl. liii, fig. 8; pl. lviii, fig. 11. (*Anisopus*.)

Triassic; Connecticut.

Batrachopus gracilior (E. Hitch.).

Hitchcock, E. 1863 A, p. 54. (*Anisopus*.)

Hitchcock, C. H. 1889 B, p. 119. (*Anisichnus*.)

Hitchcock, E. 1865 A, p. 6, pl. i, fig. 3. (*Anisopus*.)
Triassic; Massachusetts.

Batrachopus gracilis (E. Hitch.).

Hitchcock, E. 1848 A, p. 228, pl. xvi, fig. 34. (*Anisopus*.)

Dana, J. D. 1896 A, p. 751, fig. 1172. (*Anisopus*.)

Deane, J. 1861 A, p. 46, pl. xxvi, fig. 1. (*Anisopus*.)

Hitchcock, C. H., 1889 B, pp. 119, 122, 123. (*Anisichnus*.)

Hitchcock, E. 1858 A, p. 61, pl. ix, fig. 4; pl. xxxv, fig. 5; pl. xxxvi, figs. 1-5; pl. lviii, fig. 9. (*Anisopus*.)

1861 A, p. 155, fig. 4. (*Anisopus*.)

Lydekker, R. 1890 A, p. 221. (*Anisopus*.)

Triassic; Massachusetts, New Jersey, Pennsylvania.

CHEIROTHEROIDES E. Hitch. Type *C. pilulatus* E. Hitch.

Hitchcock, E. 1858 A, p. 130.

Cheirotheroides pilulatus E. Hitch.

Hitchcock, E. 1858 A, p. 130, pl. xxiii, figs. 3, 4; pl. xxxvi, fig. 6; pl. liv, fig. 3.

Hitchcock, C. H. 1889 B, p. 119.

Triassic; Massachusetts.

CHELICHNUS Jardine. Type *Testudo duncani* Owen.

Jardine, W., 1850, Ann. Nat. Hist., vi, p. 208.

Chelichnus wymanianus Lea.

Lea, I. 1856 C, p. 78.

Cope, E. D. 1871 C, p. 242.

Lea, I. 1856 B, p. 123.

Triassic; Pennsylvania.

CHELONOIDES E. Hitch. Type *C. incedens* E. Hitch.

Hitchcock, E. 1858 A, p. 140.

Chelonoides incedens E. Hitch.

Hitchcock, E. 1858 A, p. 140, pl. xxxi, fig. 3

Hitchcock, C. H. 1889 B, p. 119.

Triassic; Massachusetts.

CHIROTHERIUM Kaup. Type *C. barthii* Kaup.

Kaup, J. J., 1835, Thierreich, i, p. 246; figure, p. 247.

The spelling Cheirotherium is usually employed for this genus. The original form is given above.

Cunningham, J. 1839 A, p. 12.

Gaudry, A. 1890 C, p. 171.

Hitchcock, C. H. 1869 A, p. 133.

1873 A, p. 436.

1889 A, p. 186.

King, A. T. 1845 A, p. 343. (Thenaropus,¹ type *T. heterodactylus*.)

Lortet, L. 1892 A, p. 125.

Lyll, C. 1846 A, p. 25.

Miller, S. A. 1889 A, p. 619.

Neues Jahrbuch Mineral., etc., 1835, pp. 110, 111, 122, 243.

Owen, R. 1860 E, p. 163.

Quenstedt, F. A. 1885 A, p. 121.

Warren, J. C. 1856 A.

Zittel, K. A. 1890 A, p. 4.

¹This name had previously been employed by King for tracks of a very different kind.**Chirotherium? heterodactylum** (King.) ✓

King, A. T. 1845 A, pp. 343, 348, figs. 7a-7c. (Thenaropus.)

1845 C, p. 216. (Thenaropus.)

Lea, I. 1853 A, p. 187. (Thenaropus.)

Lyll, C. 1846 A, p. 25. ("Cheirotherium.")

Coal-measures; Pennsylvania.

Chirotherium? reiteri Moore. ✓

Moore, W. D. 1873 A.

Coal-measures; Pennsylvania.

COLLETTOSAURUS Cox. Type *C. indianaensis* Cox.

Cox, E. T. 1874 A, p. 247.

Miller, S. A. 1889 A, p. 620.

Collettosaurus indianaensis Cox. ✓

Cox, E. T. 1874 A, p. 247, plate.

Amer. Jour. Science 1876 A.

Coal-measures; Indiana.

COMPTICHNUS E. Hitch. Type *C. obesus* E. Hitch.

Hitchcock, E. 1865 A, p. 9.

Comptichnus obesus E. Hitch.

Hitchcock, E. 1865 A, p. 9, pl. v, fig. 4; pl. xviii, fig. 6.

Hitchcock, C. H. 1889 B, p. 119.

Triassic; Massachusetts.

CORVIPES E. Hitch. Type *C. lacertoideus* E. Hitch.

Hitchcock, E. 1858 A, p. 98.

Corvipes lacertoideus E. Hitch.

Hitchcock, E. 1858 A, p. 98, pl. xvii, fig. 3; pl. xlvii, fig. 1; pl. xxxv, fig. 7.

Hitchcock, C. H. 1889 B, pp. 118, 122.

Triassic; Massachusetts, Connecticut.

CRUCIPES Butts. Type *C. parvus* Butts.

Butts, E. 1891 A, p. 19.

Crucipes parvus Butts. ✓

Butts, E. 1891 A, p. 19.

Coal-measures; Missouri.

CUNICHNOIDES E. Hitch. Type *C. marsupialoides* E. Hitch.

Hitchcock, E. 1858 A, p. 54.

Cunicnoides marsupialoides E. Hitch.

Hitchcock, E. 1858 A, p. 55, pl. ix, fig. 5; pl. lx, figs. 2, 3, 4.

Hitchcock, E. 1861 A, p. 154.

Triassic; Connecticut.

DROMOPUS Marsh. Type *D. agilis* Marsh.

Marsh, O. C. 1894 D, p. 82.

Fürbringer, M. 1900 A, pp. 627, 673.

Dromopus agilis Marsh.

Marsh, O. C. 1894 D, p. 182, pl. ii, fig. 3; pl. iii, fig. 3.

Dana, J. D. 1896 A, p. 684, fig. 1115.

Marsh, O. C. 1894 I, p. xi, fig. 3.

1895 D, p. 492, fig. 10.

Miller, S. A. 1897 A, p. 793.

Coal-measures; Kansas.

EUBRONTES E. Hitch. No type was mentioned, but *E. giganteus* may be taken.

Hitchcock, E. 1845 B, p. 23.

Hitchcock, C. H. 1873 A, p. 432 (Brontozoum).

1889 B, p. 118. (Brontozoum.)

Hitchcock, E. 1847 A, p. 50. (Brontozoum.)

1848 A, p. 169. (Brontozoum.)

1858 A, p. 63. (Brontozoum.)

Huxley, T. H. 1876 B, xiii, p. 515. (Brontozoum.)

Lydekker, R. 1890 A, p. 220. (Brontozoum.)

Owen, R. 1860 E, p. 290. (Brontozoum.)

Brontozoum is a substitute name for the earlier *Eubrontes*.

Eubrontes approximatus (E. Hitch.).

Hitchcock, E. 1865 A, p. 23, pl. x, fig. 2. (Brontozoum.)

Hitchcock, C. H. in Hitchcock, E. 1865 A, p. 24. (Brontozoum.)

1889 B, pp. 118, 121, 122, 123. (Brontozoum.)

Triassic; Massachusetts, New Jersey.

This species is based on portions of *Eubrontes giganteus*, but the writer can not determine whether or not any of the figures which have been published to illustrate *E. giganteus* belong here.

Eubrontes dananus E. Hitch.

Hitchcock, E. 1845 B, p. 23.

Cook, G. H. 1885 A, p. 96. (Brontozoum sillimanium.)

Deane, J., 1861 A, p. 37, pls. vii, ix, x.

Hitchcock, C. H. 1889 B, pp. 118, 122, 123. (Brontozoum sillimanium.)

Hitchcock, E. 1836 A, p. 318. (Ornithichnites tuberosus, part.)

1837 A, p. 175. (Ornithichnites tuberosus.)

1841 A, p. 486, in part, pl. xxxvii, fig. 21; pl.

xxxviii, fig. 22 (Ornithoidichnites tuberosus); p. 488 (Ornithoidichnites cuneatus, in part.)

1843 A, p. 254 (Ornithoidichnites tuberosus);

p. 256, pl. xi, fig. 2 (O. sillimanii).

1844 A, p. 300. (O. tuberosus, part.)

1847 A, p. 49. (Brontozoum sillimanium.)

1848 A, p. 171, pl. iii, fig. 2. (B. sillimanium.)

1858 A, p. 68, pl. xii, fig. 3; pl. xxxiii, figs. 4, 5; pl. xliii, fig. 6. (B. sillimanium.)

1865 A, p. 7, pl. v, fig. 1. (B. sillimanium.)

Lydekker, R., 1890 A, p. 220. (B. sillimanii.)

Redfield, W. C. 1843 A, p. 136. (Ornithoidichnites tuberosus.)

Warren, J. C. 1854 A, p. 27. (B. sillimanium.)

Triassic; Massachusetts, Connecticut, New Jersey, Pennsylvania.

Eubrontes divaricatus (E. Hitch.).

Hitchcock, E. 1865 A, p. 7. (Brontozoum.)

Cook, G. H. 1885 A, p. 96. (Brontozoum.)

Hitchcock, C. H. 1889 B, p. 126. (Brontozoum.)

Hitchcock, E. 1865 A, p. 2. (B. isodactylum, in part.)

Triassic; Massachusetts, Connecticut.

This species is based partly on *Brontozoum isodactylum*, Edw. Hitchcock, 1858 A, p. 69. See under *Plesiornis minor*.

Eubrontes expansus E. Hitch.

Hitchcock, E. 1845 B, p. 23.

1841 A, p. 487, pl. xxxviii, fig. 23; pl. xxxix, fig. 24. (Ornithoidichnites.)

1848 A, p. 174, pl. iii, fig. 1. (Brontozoum.)

Triassic; Massachusetts.

The materials on which this species was based have evidently been assigned to some other species; which one can not be determined.

Eubrontes exsertus (E. Hitch.).

Hitchcock, E. 1858 A, p. 67, pl. xii, fig. 1; pl. xxxvii-li; pl. lvii, fig. 3. (Brontozoum.)

Deane, J., 1861 A, p. 39, pl. xiii. (Brontozoum.)

Hitchcock, C. H. 1889 B. (Brontozoum.)

Triassic; Massachusetts.

Eubrontes giganteus E. Hitch.

Hitchcock, E. 1845 B, p. 23.

Cook, G. H. 1885 A, p. 96. (Brontozoum.)

Dana, J. D. 1896 A, p. 752, fig. 1177. (Brontozoum.)

Deane, J. 1861 A, p. 42, pl. xv. (Brontozoum.)

Giebel, C. G. 1847 B, p. 35. (Ornithichnites.)

Hitchcock, C. H. 1889 B. (Brontozoum.)

itchecock, E. 1836 A, p. 317. (Ornithichnites.)

1837 A, p. 175. (Ornithichnites.)

1841 A, p. 484, pl. xxxvi, fig. 18. (Ornithoidichnites.)

1845 A, p. 63. (Ornithoidichnites.)

- Hitchcock, E. 1847 A, p. 57. (Brontozoum.)
 1848 A, p. 169, pl. i, fig. 1. (Brontozoum.)
 1858 A, p. 64, pl. xxxiii, figs. 1-3; pl. xli, fig. 1; pl. liii, fig. 7; pl. lvii, fig. 1. (Brontozoum.)
 1861 A, p. 149. (Brontozoum.)
 1865 A, p. 23, fig. 1. (Brontozoum.)
 Lydekker, R. 1890 A, p. 220.
 Owen, R. 1860 E, p. 289. (Brontozoum.)
 Pictet, F. J. 1853 A, p. 406, pl. xx, fig. 8. (Ornithichnites.)
 Quenstedt, F. A. 1852 A, p. 82. (Ornithichnites.)
 Warren, J. C. 1854 A, p. 25. (Brontozoum.)
 Triassic; Massachusetts, Connecticut, New Jersey.

Eubrontes minusculus (E. Hitch.)

- Hitchcock, E. 1858 A, p. 65, pl. xi, fig. 1; pl. xl, fig. 2; pl. xlii, fig. 1; pl. xlii, fig. 3; pl. lvii, fig. 2. (Brontozoum.)
 Cook, G. H. 1885 A, p. 96. (Brontozoum.)
 Deane, J. 1861 A, p. 41, pls. xiv, xvi, xvii. (Brontozoum.)
 Hitchcock, C. H. 1889 B, pp. 118, 122. (Brontozoum.)
 Triassic; Massachusetts, New Jersey.

Eubrontes tuberatus (E. Hitch.)

- Hitchcock, E. 1858 A, p. 66, pl. xl, fig. 2; pl. lii, fig. 7. (Brontozoum.)
 Hitchcock, C. H. 1889 B, p. 118. (Brontozoum.)
 Triassic; Massachusetts.

Eubrontes tuberosus E. Hitch.

- Hitchcock, E. 1845 B, p. 23.
 Deane, J. 1861 A, p. 39, pl. xii. (Brontozoum validum.)
 Hitchcock, C. H. 1889 B, p. 118. (B. validum.)
 Hitchcock, E. 1836 A, p. 318. (Ornithichnites tuberosus, part.)
 1841 A, p. 486, in part, pl. xxxvii, fig. 20. (Ornithoidichnites.)
 1848 A, p. 172, pl. ii, figs. 1, 2. (Brontozoum loxonyx.)
 1858 A, p. 67, pl. xii, fig. 2; pl. xxxviii-li; pl. lvii, fig. 3. (Brontozoum validum.)
 Lydekker, R. 1890 A, p. 220. (B. validum.)
 Warren, J. C. 1854 A, p. 27. (B. loxonyx.)
 Triassic; Massachusetts.

EUPALAMOPUS nom. nov. Type *Palamopus dananus* E. Hitch. = *P. clarki* E. Hitch.

- Hitchcock, E. 1848 A, p. 217. (Palamopus, not of 1845.)
 1858 A, p. 127. (Palamopus, not of 1845.)
 This generic name is intended as a substitute for *Palamopus* E. Hitch., 1848. The latter name had been employed in 1845 to notate a genus based on *P. anomalus* E. Hitch., later called *Macropterna recta* E. Hitch.

Eupalamopus dananus (E. Hitch.).

- Hitchcock, E. 1848 A, p. 217, pl. xi, figs. 1, 2. (Palamopus.)
 Hitchcock, C. H. 1889 B, p. 119. (P. clarki.)
 Hitchcock, E. 1858 A, p. 127, pl. xxiii, fig. 2; pl. xlii, fig. 2. (P. clarki.)
 Triassic; Massachusetts.

EXOCAMPE E. Hitch. Type *E. arcta* E. Hitch.

- Hitchcock, E. 1858 A, p. 142.
 Through error this genus is called, on pl. xxv of Hitchcock's paper of 1858, *Hectocampe*.

Exocampe arcta E. Hitch.

- Hitchcock, E. 1858 A, p. 143, pl. xxv, figs. 5, 6, 10; pl. xlix, fig. 5.
 Deane, J. 1861 A, p. 57, pl. xxxix.
 Hitchcock, C. H. 1889 B, p. 119.
 Triassic; Massachusetts.

Exocampe minima E. Hitch.

- Hitchcock, E. 1865 A, p. 11, pl. xviii, fig. 3, and Appendix.

- Hitchcock, C. H. 1889 B, p. 119.
 Hitchcock, E. 1863 B, p. 86. (Insufficient description.)
 Triassic; Massachusetts.

Exocampe ornata E. Hitch.

- Hitchcock, E. 1858 A, p. 143, pl. xxv, fig. 11; pl. lviii, figs. 1, 6.
 Deane, J. 1861 A, p. 57, pl. xxxviii, fig. 1.
 Hitchcock, C. H. 1889 B, p. 119.
 Triassic; Massachusetts.

FULICOPUS E. Hitch. Type *F. lyellianus* E. Hitch.

- Hitchcock, E. 1845 B, p. 23.
 1848 A, p. 177. (Æthyopus.)
 1858 A, p. 70. (Amblonyx.)
 Warren, J. C. 1854 A, p. 28. (Æthyopus.)
Fulicopus giganteus (E. Hitch.).
 Hitchcock, E. 1858 A, p. 71, pl. xlii, fig. 1; pl. xxxviii, figs. 1, 2; pl. lvii, figs. 5. (Amblonyx.)
 Hitchcock, C. H. 1889 B, p. 118. (Amblonyx.)
 Hitchcock, E. 1865 A, p. 2. (Amblonyx.)
 Triassic; Massachusetts.

Fulicopus lyellianus (E. Hitch.).

- Hitchcock, E. 1845 B, p. 23.

- Hitchcock, C. H. 1889 B, p. 118. (Amblonyx.)
 Hitchcock, E. 1843 A, p. 257, pl. xi, fig. 1. (Ornithoidichnites lyellii.)
 1848 A, p. 178, pl. iv, fig. 1. (Æthyopus.)
 1858 A, p. 71, pl. xlii, fig. 2; pl. xxxviii, fig. 2. (Amblonyx.)
 1863 B, p. 85. (A. lyellianus, doubtful species.)
 1865 A, p. 2. (Amblonyx.)
 Warren, J. C. 1854 A, p. 28. (Æthyopus.)
 Triassic; Massachusetts.

GIGANDIPUS E. Hitch. Type *G. caudatus* E. Hitch.

Hitchcock, E. 1856 A, p. 97.

Hitchcock, C. H. 1873 A, p. 434, fig. 3. (*Gigantitherium*.)

Hitchcock, E. 1855 A, p. 416. (*Gigadipus*; no definition.)

1858 A, p. 93. (*Gigantitherium*.)

Warren, J. C. 1856 A.

Gigandipus caudatus E. Hitch.

Hitchcock, E. 1856 A, p. 97, text-figures.

Hitchcock, C. H. 1889 B, p. 118. (*Gigantitherium*.)

Hitchcock, E. 1855 A, p. 416. (*Gigadipus*; insufficient description.)

Hitchcock, E. 1858 A, p. 93, pl. xvi, figs. 1, 2; pl. xlv, fig. 4. (*Gigantitherium*.)

Triassic; Massachusetts.

Gigandipus minor (E. Hitch.).

Hitchcock, E. 1858 A, p. 95, pl. xvii, fig. 1; pl. xli, fig. 2; pl. xlii, fig. 2. (*Gigantitherium*.)

Hitchcock, C. H. 1889 B, p. 118. (*Gigantitherium*.)

Triassic; Massachusetts.

GRALLATOR E. Hitch. No type assigned.

Hitchcock, E. 1858 A, p. 72.

Lydekker R. 1890 A, p. 222.

Grallator cuneatus E. Hitch.

Hitchcock, E. 1858 A, p. 74, pl. xlii, fig. 6; pl. xxxix, figs. 1, 3; pl. xli, figs. 1, 2.

Deane, J. 1861 A, p. 38, pl. viii.

Eyermann, J. 1889 A, p. 32.

Hitchcock, C. H. 1873 A, p. 432.

1889 B, pp. 118, 122.

Hitchcock, E. 1841 A, p. 488, text-fig. 106; pl. xxxix, fig. 25; pl. xlviii, figs. 45, 55. (*Ornithoidichnites*.)

1843 A, p. 258. (*Ornithoidichnites*.)

Lydekker, R. 1890 A, p. 222.

Triassic; Connecticut, New Jersey.

Grallator cursorius E. Hitch.

Hitchcock, E. 1858 A, p. 72, pl. xlii, fig. 3; pl. lviii, fig. 4.

Hitchcock, C. H., 1889 B, pp. 118, 122.

Triassic; Massachusetts, New Jersey.

Grallator formosus E. Hitch.

Hitchcock, E. 1858 A, p. 75, text-fig., p. 77.

Cook, G. H. 1885 A, p. 96.

Deane, J. 1861 A, p. 39, pl. xi.

Hitchcock, C. H. 1889 B, pp. 118, 122.

Triassic; Connecticut, Massachusetts, New Jersey.

Grallator gracilis C. H. Hitch.

Hitchcock, C. H. 1865 A, p. 8, pl. ix, fig. 7.

1869 A.

1889 B, p. 118.

Triassic; Massachusetts, New Jersey.

Grallator parallelus E. Hitch.

Hitchcock, E. 1847 A, p. 50, fig. 2. (*Brontozoum*.)

Cook, G. F. 1885 A, p. 96.

Hitchcock, C. H. 1889 B, pp. 118, 122.

Hitchcock, E. 1836 A, p. 318. (*Ornithichnites tuberosus dubius*.)

1837 B, p. 175. (*O. parallelus*.)

1848 A, p. 175, pl. iii, figs. 3, 4. (*Brontozoum*.)

1863 B, p. 86.

1865 A, p. 7, pl. iv, fig. 1.

Warren, J. C. 1854 A, p. 27. (*Brontozoum*.)

Triassic; Massachusetts, New Jersey.

Grallator tenuis E. Hitch.

Hitchcock, E. 1858 A, p. 73, pl. xlii, fig. 4; pl. liii, fig. 5.

Deane, J. 1861 A, p. 36, pl. iv, fig. 3; pl. xxvii, fig. 2.

Eyermann, J. 1889 A, p. 32.

Hitchcock, C. H. 1889 B, p. 118.

Triassic; Massachusetts, New Jersey, Connecticut.

HARPEDACTYLUS E. Hitch. Type *H. tenuissimus* E. Hitch.

Hitchcock, E. 1845 B, p. 24.

1848 A, p. 206.

1858 A, p. 112.

Harpedactylus crassus E. Hitch.

Hitchcock, E. 1865 A, p. 12, pl. iii, fig. 1.

Hitchcock, C. H. 1889 B, p. 119.

Hitchcock, E. 1863 B, p. 86. (No description.)

Triassic; Massachusetts.

Harpedactylus gracilior E. Hitch.

Hitchcock, E. 1865 A, p. 12, pl. iii, fig. 2.

Hitchcock, C. H. 1889 B, p. 119.

Hitchcock, E. 1863 B, p. 86. (No description.)

Triassic; Massachusetts.

Harpedactylus tenuissimus E. Hitch.

Hitchcock, E. 1845 B, p. 24.

Hitchcock, C. H. 1889 B, p. 119. (*H. gracilis*.)

Hitchcock, E. 1841 A, p. 482, pl. xxxiv, fig. 13. (*Sauridichnites*.)

1848 A, p. 206, pl. xiv, fig. 2. (*H. gracilis*.)

1858 A, p. 112, pl. xx, fig. 4; pl. lii, fig. 5.

(*H. gracilis*.)

Triassic; Massachusetts.

HELICURA E. Hitch. Type *H. littoralis* E. Hitch.

Hitchcock, E. 1848 A, p. 244.
1858 A, p. 141.

Helcura anguinea E. Hitch.

Hitchcock, E. 1858 A, p. 141, pl. xxxvi, fig. 9.
Triassic; Massachusetts.

Helcura littoralis E. Hitch.

Hitchcock, E. 1848 A, p. 244, pl. xv, fig. 1; pl. xxiii, fig. 3.

Hitchcock, C. H. 1889 B, p. 119. (*H. caudata*.)
Hitchcock, E. 1858 A, p. 140, pl. xxxvii, fig. 3; pl. xl, fig. 1. (*H. caudata*.)
Triassic; Massachusetts.

Helcura surgens E. Hitch.

Hitchcock, E. 1858 A, p. 141, pl. xxxvi, fig. 10.
Hitchcock, C. H. 1889 B, p. 119.
Triassic; Massachusetts.

HOPLICHNUS E. Hitch. Type *H. quadrupedans* E. Hitch.

Hitchcock, E. 1848 A, p. 230.
1858 A, p. 134.

It is doubtful whether or not this genus of footmarks was produced by a vertebrate animal.

Hoplichnus equus E. Hitch.

Hitchcock, E. 1858 A, p. 134, pl. xxiv, figs. 3-5.
Hitchcock, C. H. 1889 B, p. 119.
Triassic; Massachusetts, Connecticut?

Hoplichnus quadrupedans E. Hitch.

Hitchcock, E. 1848 A, p. 230, pl. xvi, figs. 7, 8; pl. xxii, fig. 3.
Hitchcock, C. H. 1889 B, p. 119. (*H. poledrus*.)
Hitchcock, E. 1858 A, p. 136, pl. xxiv, figs. 6, 7; pl. xlviii, fig. 9. (*H. poledrus*.)
Triassic; Massachusetts.

HYLOPUS Dawson. Type *H. logani* Dawson.

Dawson, J. W. 1894 A, p. 260.
1895 A, p. 77.

Hypopus caudifer Dawson. ✓

Dawson, J. W. 1895 A, p. 78.
Coal-measures; Nova Scotia.

Hypopus hardingi Dawson.

Dawson, J. W. 1895 A, p. 78. ✓
Subcarboniferous; Nova Scotia.

Hypopus logani Dawson.

Dawson, J. W. 1894 A, p. 260, figure. ✓
1895 A, p. 78.
Subcarboniferous; Nova Scotia.

Hypopus minor Dawson. ✓

Dawson, J. W. 1895 A, p. 78.
Coal-measures; Nova Scotia.

Hypopus? trifidus Dawson. ✓

Dawson, J. W. 1895 A, p. 78.
Coal-measures; Nova Scotia.

Hypopus sp. indet. ✓

Dawson, J. W. 1895 A, p. 78.
Coal-measures; Nova Scotia.

HYPHEPUS E. Hitch. Type *H. fieldi* E. Hitch.

Hitchcock, E. 1858 A, pp. 97, 180.

Hyphepus fieldi E. Hitch.

Hitchcock, E. 1858 A, pp. 97, 189, pl. xvii, fig. 2;
pl. xxxv, fig. 11; pl. xli, fig. 2; pl. xlii, fig. 2.

Hitchcock, C. H. 1889 B, p. 118.
Triassic; Massachusetts.

ISOCAMPE E. Hitch. Type *I. strata* E. Hitch.

Hitchcock, E. 1858 A, p. 119.

Isocampe strata E. Hitch.

Hitchcock, E. 1858 A, p. 120, pl. xx, fig. 5; pl. xxxvi, fig. 5.

Hitchcock, C. H. 1889 B, p. 118.
Triassic; Connecticut, Massachusetts.

LANGUNCULAPES E. Hitch. Type *L. latus* E. Hitch.

Hitchcock, E. 1858 A, p. 132.

Langunculapes latus E. Hitch.

Hitchcock, E. 1858 A, p. 132, pl. xxiv, fig. 1; pl. xlv, fig. 4.

Hitchcock, C. H. 1889 B, p. 119.
Triassic; Massachusetts.

LEPTONYX E. Hitch. Type *L. lateralis* E. Hitch.*Hitchcock, E.* 1865 A, p. 8.**Leptonyx lateralis** E. Hitch.*Hitchcock, E.* 1865 A, p. 8, pl. v, fig. 3.*Hitchcock, C. H.* 1889 B, p. 118.

Triassic; Massachusetts.

LIMNOPUS Marsh. Type *L. vagus* Marsh.*Marsh, O. C.* 1894 D, p. 82.**Limnopus vagus** Marsh.*Marsh, O. C.* 1894 D, p. 82, pl. ii, fig. 2; pl. iii, fig. 2.*Dana, J. D.* 1896 A, p. 684, fig. 1114.*Marsh, O. C.* 1894 I, pl. xi, fig. 2.

1895 D, p. 492, fig. 9.

Miller, S. A. 1897 A, p. 793.

Coal-measures; Kansas.

NANOPUS Marsh. Type *N. caudatus* Marsh.*Marsh, O. C.* 1894 D, p. 82.**Nanopus caudatus** Marsh.*Marsh, O. C.* 1894 D, p. 82, pl. ii, fig. 1; pl. iii, fig. 1.*Dana, J. D.* 1896 A, p. 684, fig. 1113. (Nasopus.)*Marsh, O. C.* 1894 I, pl. xi, fig. 1.

1895 D, p. 492, fig. 8.

Miller, S. A. 1897 A, p. 793.

Coal-measures; Kansas.

NOTALACERTA Butts. Type *N. missouriensis* Butts.*Butts, E.* 1891 A, p. 18.**Notalacerta missouriensis** Butts.*Butts, E.* 1891 A, p. 18, fig. 2.

Coal-measures; Missouri.

NOTAMPHIBIA Butts. Type *N. magna* Butts.*Butts, E.* 1891 B, p. 44.**Notamphibia magna** Butts.*Butts, E.* 1891 B, p. 44.

Coal-measures; Missouri.

ORTHODACTYLUS E. Hitch. Type *O. floriferus* E. Hitch.*Hitchcock, E.* 1858 A, p. 113.**Orthodactylus floriferus** E. Hitch.*Hitchcock, E.* 1858 A, p. 114, pl. xx, fig. 7.*Deane, J.* 1861 A, p. 44, pl. xxiii.*Hitchcock, C. H.* 1889 B, p. 119.

Triassic; Massachusetts.

Hitchcock, C. H. 1889 B, p. 119.

Triassic; Massachusetts.

Orthodactylus linearis E. Hitch.*Hitchcock, E.* 1858 A, p. 115, pl. xx, fig. 9; pl. xlviii, fig. 4.*Deane, J.* 1861 A, p. 57, pl. xxxviii, fig. 2.*Hitchcock, C. H.* 1889 B, p. 119.

Triassic; Massachusetts.

Orthodactylus introvergens E. Hitch.*Hitchcock, E.* 1858 A, p. 114, pl. xx, fig. 8; pl. li, fig. 1.OTOZOUM E. Hitch. Type *O. moodii* E. Hitch.*Hitchcock, E.* 1847 A, p. 54.*Field, R.* 1860 B, p. 339.*Hitchcock, C. H.* 1873 A, p. 435.

1889 B.

Hitchcock, E. 1848 A, p. 214.

1858 A, p. 123.

Owen, R. 1860 E, p. 165.*Quenstedt, F. A.* 1852 A, p. 157.*Warren, J. C.* 1854 A, p. 32.**Otozoum caudatum** C. H. Hitch.*Hitchcock, C. H.* 1871 A, p. xx.

1889 B, pp. 119, 127.

Triassic; Connecticut.

Otozoum moodii E. Hitch.*Hitchcock, E.* 1847 A, p. 55, fig. 1.*Dana, J. D.* 1896 A, p. 752, fig. 1176.*Deane, J.* 1861 A, p. 55, pl. xxxvii.*Hitchcock, C. H.* 1871 A, p. xxi.

1889 B, pp. 119, 127.

Hitchcock, E. 1848 A, p. 214, pl. xii, fig. 1.

1858 A, p. 123, pl. xxii; pl. xxiii, fig. 1; pl.

xxxiii, figs. 4, 5; pl. xlv, fig. 5.

1861 A, p. 148, fig. 2.

Triassic; Massachusetts, Connecticut.

Otozoum parvum C. H. Hitch.*Hitchcock, C. H.* 1889 B, pp. 119, 122, 127.

Triassic; New Jersey, Pennsylvania.

PALÆOSAURUS NOM. NOV. Type *Sauropus primævus* Lea.

- Dawson, J. W. 1868 A, p. 357. (Sauropus.)
 1895 A, p. 77. (Sauropus.)
 Lea, I. 1849 A, p. 91. (Sauropus; preoccupied by E. Hitchcock, 1845.)
 Lesley, J. P., 1890 A, p. 728, figures. (Sauropus.)
 Miller, S. A. 1889 A, p. 625. (Sauropus.)
 Owen, R. 1860 E, p. 167. (Sauropus.)

Palæosauropus antiquior (Dawson).

- Dawson, J. W. 1882 A, p. 652. (Sauropus.)
 1895 A, p. 77. (Sauropus.)
 Subcarboniferous; Nova Scotia.

Palæosauropus primævus (Lea).

- Lea, I. 1849 A, p. 91, figure. (Sauropus.)
 Cope, E. D. 1871 C, p. 241. (Sauropus.)
 Dana, J. D. 1896 A, p. 645, fig. 1023. (Sauropus.)
 Lea, I. 1850 A. (Sauropus.)
 1852 A, p. 307, pls. xxxi, xxxii. (Sauropus.)
 1855 A. (Sauropus.)
 Miller, S. A. 1889 A, p. 625, fig. 1193. (Sauropus.)
 Silliman, B. 1852 B. (Sauropus.)

- Zittel, K. A. 1890 A, p. 411. (Sauropus.)
 Coal-measures; Pennsylvania.

Palæosauropus sydenensis (Dawson).

- Dawson, J. W. 1863 E, p. 431, fig. 1. (Sauropus.)
 1868 A, p. 358, fig. 140. (Sauropus.)
 1876 A, p. 441. (Sauropus.)
 1878 A, p. 358, fig. 140; suppl., p. 63. (Sauropus.)
 1895 A, p. 77. (Sauropus.)
 Lesley, J. P. 1890 A, p. 920, figure. (Sauropus.)
 Coal-measures; Cape Breton Island.

Palæosauropus unguifer (Dawson).

- Dawson, J. W. 1872 A, p. 251, figure. (Sauropus.)
 1876 A, p. 441. (Sauropus.)
 1878 A, suppl., p. 64. (Sauropus.)
 1882 A, p. 652. (Sauropus.)
 1894 A, p. 267. (Sauropus.)
 1895 A, p. 77. (Sauropus.)
 Carboniferous (Millstone Grit); Nova Scotia.

PALAMOPUS E. Hitch. Type *P. anomalus* E. Hitch.

- Hitchcock, E. 1845 B, p. 24.
 1845 B, p. 24. (Sillimanian, in part.)
 1848 A, p. 233. (Macropterna.)
 1858 A, p. 128. (Macropterna.)
 Lydekker, R. 1890 A, p. 219. (Macropterna.)
 This is not the *Palamopus* E. Hitch. of 1848 and subsequently. The latter is here replaced by *Eupalamopus*. Since E. Hitchcock's *Macropterna recta* (= *P. anomalus*) belongs here, it becomes necessary to refer here also the other species of *Macropterna*.

Palamopus anomalus E. Hitch.

- Hitchcock, E. 1845 B, p. 24.
 Amer. Jour. Science 1847 B, p. 276.
 Deane, J. 1861 A, p. 79, fig. 4. (Sauroidichnites palmatus.)
 1847 B. (Sauroidichnites palmatus.)
 Hitchcock, E. 1836 A, p. 324, fig. 15. (Ornithichnites palmatus.)
 1837 B, p. 175. (Sauroidichnites palmatus.)
 1841 A, p. 483, pl. xxxiv, fig. 15. (Sauroidichnites palmatus.)
 1848 A, p. 235, pl. xv, fig. 6. (Macropterna recta.)
 Triassic; Massachusetts.

Palamopus divaricans (E. Hitch.).

- Hitchcock, E. 1848 A, p. 237, pl. xv, fig. 7. (Macropterna.)
 Dana, J. D. 1896 A, p. 752, fig. 1173. (Macropterna.)
 Deane, J. 1861 A, p. 45, pl. xxiv, fig. 1. (Macropterna.)
 Hitchcock, C. H. 1889 B, p. 119. (Macropterna.)

- Hitchcock, E. 1841 A, p. 483 (part), pl. xxxiv, fig. 16. (Sauroidichnites palmatus.)
 1858 A, p. 129, pl. xxiii, fig. 7. (Macropterna.)
 Lydekker, R. 1890 A, p. 219. (Macropterna.)
 Triassic; Massachusetts.

Palamopus gracilipes (E. Hitch.).

- Hitchcock, E. 1858 A, p. 129, pl. xxiii, fig. 6; pl. xxxiv, fig. 1. (Macropterna.)
 ?Deane, J. 1861 A, p. 47, pl. xxix, fig. 1. (Macropterna.)
 Hitchcock, C. H. 1889 B, p. 119. (Macropterna.)
 Triassic; Massachusetts.

Palamopus rogersianus (E. Hitch.).

- Hitchcock, E. 1845 B, p. 24. (Sillimanian rogersianus; Argoides minimus.)
 Deane, J. 1861 A, p. 47, pl. xxviii, fig. 2. (Macropterna vulgaris.)
 Hitchcock, C. H. 1889 B, p. 119. (Macropterna vulgaris.)
 Hitchcock, E. 1841 A, p. 497 (in part), pl. xlii, fig. 30. (Ornithoidichnites minimus, not of 1836, 1837.)
 1843 A, p. 256, pl. xi, fig. 7. (Ornithoidichnites rogersi.)
 1848 A, p. 187, pl. vi, fig. 6 (Argozoum minimum); p. 233, pl. xv, fig. 9 (Macropterna rhynchosauroidea).
 1858 A, p. 128, pl. xxiii, fig. 5; pl. xxxv, fig. 9; pl. xxxvii, fig. 4; pl. xlviii, fig. 7; pl. xlix, fig. 6. (M. vulgaris.)
 Triassic; Massachusetts, Connecticut.

PLATYPTERNA E. Hitch. Type, none given; *P. deaniana* may be taken.

Hitchcock, E. 1845 B, p. 25.

Edwards, A. Milne 1863 A, p. 136.

1869 A, p. 672.

Hitchcock, E. 1845 B, p. 25. (Calopus, type *C. delicatulus*.)

1848 A, p. 188.

1858 A, p. 83.

Warren, J. C. 1854 A, p. 29.

Platypterna concamerata (E. Hitch.).

Hitchcock, E. 1848 A, p. 207, pl. xiv, fig. 3. (Harpedactylus.)

Hitchcock, C. H. 1889 B, p. 118. (P. varica.)

Hitchcock, E. 1858 A, p. 85, pl. xiv, fig. 8; pl. xlvii, fig. 4. (P. varica.)

Triassic; Massachusetts.

Platypterna deaniana E. Hitch.

Hitchcock, E. 1845 B, p. 25.

Hitchcock, C. H. 1889 B, p. 118.

Hitchcock, E. 1841 A, p. 493, pl. xlii, figs. 31, 32. (Ornithoidichnites deanii.)

1848 A, p. 189, pl. vii, fig. 1.

1858 A, p. 83, pl. xiv, fig. 4.

1863 B, p. 85.

1865 A, p. 2.

Triassic; Connecticut.

Platypterna delicatula E. Hitch.

Hitchcock, E. 1845 B, p. 25. (Calopus.)

Hitchcock, C. H. 1889 B, p. 118.

Hitchcock, E. 1841 A, p. 497, pl. xlv, fig. 40. (Ornithoidichnites.)

Hitchcock, E. 1848 A, p. 190, pl. vii, fig. 4.

1858 A, p. 84, pl. xiv, fig. 6; pl. lviii, fig. 8.

Triassic; Connecticut.

Platypterna digitigrada E. Hitch.

Hitchcock, E. 1858 A, p. 86, pl. xiv, fig. 9; pl. li, fig. 2.

Hitchcock, C. H. 1889 B, p. 118.

Triassic; Massachusetts.

Platypterna gracillima E. Hitch.

Hitchcock, E. 1858 A, p. 86, pl. xiv, fig. 12.

1865 A, p. 2.

Triassic; Massachusetts.

This species was rejected in the publication last quoted; but no statement is made as to what species the specimens are to be referred.

Platypterna recta E. Hitch.

Hitchcock, E. 1848 A, p. 209, pl. v, fig. 5. (Harpedactylus.)

Hitchcock, C. H. 1889 B, p. 118.

Hitchcock, E. 1858 A, p. 84, pl. xiv, fig. 7; pl. xlvii, fig. 3.

Triassic; Massachusetts.

Platypterna tenuis E. Hitch.

Hitchcock, E. 1845 B, p. 25.

Hitchcock, C. H. 1889 B, p. 118.

Hitchcock, E. 1841 A, p. 494, pl. xliii, figs. 33, 34. (Ornithoidichnites.)

1848 A, p. 189, pl. vii, figs. 2, 3.

1858 A, p. 84, pl. xiv, fig. 5; pl. lviii, fig. 10.

Triassic; Connecticut.

PLECTROPTERNA E. Hitch. Type *Plectropus minitans* E. Hitch.

Hitchcock, E. 1858 A, p. 108. (For Plectropus, preoccupied.)

1845 B, p. 24. (Plectropus.)

1848 A, p. 198. (Plectropus.)

Plectropterna angusta E. Hitch.

Hitchcock, E. 1858 A, p. 110, pl. xviii, fig. 4; pl. xxxvi, fig. 3.

Hitchcock, C. H. 1889 B, p. 119.

Triassic; Massachusetts.

Plectropterna elegans E. Hitch.

Hitchcock, C. H. 1889 B, pp. 122, 125.

Triassic; Connecticut.

Plectropterna gracilis E. Hitch.

Hitchcock, E. 1858 A, p. 109, pl. xviii, fig. 3; pl. xlviii, fig. 2.

Hitchcock, C. H. 1889 B, p. 119.

Hitchcock, E. 1865 A, p. 24.

Triassic; Massachusetts, Connecticut.

Plectropterna lineans E. Hitch.

Hitchcock, E. 1858 A, p. 110, pl. xviii, fig. 5; pl. xxxv, fig. 10.

Hitchcock, C. H. 1889 B, p. 119.

Triassic; Connecticut.

Plectropterna minitans E. Hitch.

Hitchcock, E. 1845 B, p. 24. (Plectropus.)

Hitchcock, C. H. 1889 B, p. 119.

Hitchcock, E. 1841 A, p. 481, pl. xxxiii, fig. 11; pl. xlviii, fig. 47 (Sauroidichnites minitans); p. 482, pl. xxxiii, fig. 12; pl. xlviii, fig. 48 (S. longipes).

1844 A, p. 304. (Sauroidichnites.)

1845 B, p. 24. (Plectropus longipes.)

1848 A, p. 198, pl. ix, figs. 2, 3 (Plectropus minitans); p. 199, pl. viii, fig. 4; pl. x, figs. 1-3 (Plectropus longipes).

1858 A, p. 108, pl. xviii, fig. 2; pl. xix, figs. 10-12.

Triassic; Connecticut, Massachusetts.

PLESIORNIS E. Hitch. No type assigned.

Hitchcock, E. 1858 A, p. 102.

1861 A, p. 150.

1865 A, p. 35.

Plesiornis giganteus C. H. Hitch.

Hitchcock, C. H. 1889 B, pp. 118, 122, 126.

Triassic; Connecticut.

Plesiornis minimus (E. Hitch.).

Hitchcock, E. 1845 B, p. 23. (Argoides.)

Hitchcock, C. H. 1889 B, pp. 118, 122. (P. æqualipes.)

Hitchcock, E. 1841 A, p. 497 in part, pl. xlv, fig. 41. (Ornithoidichnites minimus.)

1848 A, p. 187, pl. vi, fig. 6. (Argozoum minimum.)

1858 A, p. 104, text-figure. (P. æqualipes.)

Triassic; Massachusetts, Connecticut.

Argoides minimus of 1845 was based on *Ornithoidichnites minimus* of 1841. This was a composite species, a part of which was assigned to *Palamopus rogersianus* of the present work (*Macropterna vulgaris* of E. Hitchcock.) The remaining part must bear the name given it in 1845.

Plesiornis minor (E. Hitch.).

Hitchcock, E. 1845 B, p. 23. (Fulicopus.)

Cook, G. H. 1885 A, p. 96. (Brontozoum isodactylum.)

Deane, J. 1844 A, p. 76. (Ornithichnites fulicoides.)

1861 A, p. 43, pls. xviii, xxxvii. (P. quadrupes.)

Eyermaun, J. 1889 A, p. 32. (B. isodactylum.)

Field, R. 1860 A. (Ornithichnites fulicoides.)

Hitchcock, C. H. 1889 B, p. 118. (P. quadrupes.)

Hitchcock, E. 1843 A, p. 258, pl. xi, fig. 3. (Ornithichnites fulicoides.)

1844 A, p. 297. (Ornithichnites fulicoides.)

1848 A, p. 179, pl. iv, figs. 2, 3. (Æthyopus minor.)

1858 A, p. 69, pl. xii, fig. 3; pl. xl, fig. 1; pl. xivi, fig. 3; pl. lvii, fig. 4 (Brontozoum isodactylum); 1 p. 102, pl. xvii, fig. 7; pl. xxxv, figs. 1, 2; pl. xlv, fig. 5 (P. quadrupes).

Mantell, G. A. 1846 A. (Ornithichnites fulicoides.)

Quenstedt, F. A. 1852 A, p. 82. (Ornithichnites fulicoides.)

Warren, J. C. 1854 A, p. 28. (Æthyopus minor.)

Triassic; Massachusetts.

Either the whole or a part of this species was divided into the two new species *Brontozoum isodactylum* and *Anomocephalus intermedius*, which see. The *B. isodactylum* of Cook and Eyermaun may not belong here.

Plesiornis mirabilis E. Hitch.

Hitchcock, E. 1865 A, p. 35, pl. xx.

Hitchcock, C. H. 1889 B, p. 118.

Triassic; Massachusetts.

Plesiornis pilulatus E. Hitch.

Hitchcock, E. 1858 A, p. 103, pl. xvii, fig. 8; pl. xxxvi, fig. 4.

Hitchcock, C. H. 1889 B, p. 118.

Triassic; Massachusetts.

POLEMARCHUS E. Hitch. Type *Sauroidichnites polemarchius* E. Hitch = *P. gigas* E. Hitch.

Hitchcock, E. 1845 B, p. 24.

1848 A, p. 197.

1858 A, p. 107.

Polemarchus gigas E. Hitch.

Hitchcock, E. 1845 B, p. 24.

Hitchcock, C. H. 1889 B, pp. 119, 122.

Hitchcock, E. 1841 A, p. 483, pl. xxxv, fig. 17. (Sauroidichnites polemarchius.)

Hitchcock, E. 1844 A, p. 304. (Sauroidichnites polemarchius.)

1845 A, p. 63. (Sauroidichnites polemarchius.)

1848 A, p. 197, pl. ix, fig. 1.

1858 A, p. 107, pl. xviii, fig. 1; pl. lix, fig. 3.

Lesley, J. P. 1889 A, p. 729.

Triassic; Massachusetts, New Jersey, Pennsylvania.

SAUROPUS E. Hitch. Type *S. barrattii* E. Hitch. Not *Sauropus* Lea, 1849.

Hitchcock, E. 1845 B, p. 24.

Hitchcock, C. H. 1871 A, p. xxi. (Chimærichnus, for Chimæra E. Hitch., preoccupied.)

1885 B, p. 118. (Chimærichnus.)

Hitchcock, E. 1858 A, p. 118. (Chimæra.)

Sauropus barrattii E. Hitch.

Hitchcock, E. 1845 B, p. 24.

Hitchcock, C. H. 1889 B, p. 118. (Chimærichnus.)

Hitchcock, E. 1841 A, p. 477, pl. xxx, fig. 1. (Sauroidichnites.)

Hitchcock, E. 1848 A, p. 225, pl. xiv, fig. 1. (Anomocephalus.)

1858 A, p. 118, pl. xxi, figs. 1-4; pl. xxxvii, fig. 1. (Chimæra.)

Triassic; Connecticut, Massachusetts.

Sauropus ingens (C. H. Hitch.).

Hitchcock, C. H. 1889 B, pp. 118, 122. (Chimærichnus.)

Triassic; New Jersey.

SELENICHNUS E. Hitch. Type *S. falcatus* E. Hitch.*Hitchcock, E.* 1858 A, p. 133.**Selenichnus brevisculus** E. Hitch.*Hitchcock, E.* 1858 A, p. 134, pl. xxiii, fig. 9; pl. lx, fig. 7.

Deane, J. 1861 A, p. 48, pl. xxx, fig. 1.

Hitchcock, C. H. 1889 B, p. 119.

Triassic; Massachusetts.

Selenichnus falcatus E. Hitch.*Hitchcock, E.* 1858 A, p. 133, pl. xxiii, fig. 8; pl. lx, fig. 8.

Deane, J. 1861 A, p. 48, pl. xxx, fig. 2.

Hitchcock, C. H. 1889 B, p. 119.

Triassic; Massachusetts.

SHEPARDIA E. Hitch. Type *S. palmipes* E. Hitch.*Hitchcock, E.* 1858 A, p. 131.**Shepardia palmipes** E. Hitch.*Hitchcock, E.* 1858 A, p. 131, pl. xxiv, fig. 2.*Hitchcock, C. H.* 1889 B, p. 119.

Triassic; Massachusetts.

SILLIMANIUS E. Hitch. Type, none assigned.

Hitchcock, E. 1845 B, p. 24.

1848 A, p. 191. (Ornithopus; no type.)

1858 A, p. 87. (Ornithopus.)

Originally four species, *S. adamsanus*, *S. tetradactylus*, *S. gracilior*, and *S. rogersianus*, were assigned to this genus. The last-named belongs under *Palamopus*. Later (1848) *Hitchcock* referred the first three species to *Ornithopus*, a new genus. As *Sillimanius* was based on described and figured forms, *Ornithopus* becomes a synonym.

Sillimanius gracilior E. Hitch.*Hitchcock, E.* 1845 B, p. 24.*Hitchcock, C. H.* 1889 B, p. 118. (Ornithopus.)*Hitchcock, E.* 1841 A, p. 498, pl. xlv, fig. 43 (Ornithoidichnites).

1843 A. (Ornithoidichnites).

1848 A, p. 193, pl. viii, fig. 2. (Ornithopus.)

1858 A, p. 88, pl. xiv, fig. 11; pl. lviii, fig. 7. (Ornithopus.)

Triassic; Connecticut.

Sillimanius tetradactylus E. Hitch.*Hitchcock, E.* 1845 B, p. 24.

Giebel, C. G. 1847 B, p. 36. (Ornithichnites.)

Hitchcock, C. H. 1889 B, p. 118. (Ornithopus gallinaceus.)*Hitchcock, E.* 1836 A, p. 323. (Ornithichnites.)

1837 A, p. 175. (Ornithichnites.)

1841 A, p. 497, pl. xlv, fig. 42. (Ornithoidichnites.)

1848 A, p. 192, pl. viii, fig. 1. (Ornithopus gallinaceus.)

1858 A, p. 87, pl. xiv, fig. 10; pl. lviii, fig. 1. (Ornithopus gallinaceus.)

Pictet, F. J. 1853 A, p. 407. (Ornithichnites.)

Quenstedt, F. A. 1852 A, p. 82. (Ornithichnites.)

Warren, J. C. 1854 A, p. 29. (Ornithopus gallinaceus.)

Triassic; Massachusetts, Connecticut.

STENODACTYLUS E. Hitch.

Hitchcock, E. 1858 A, p. 116.**Stenodactylus curvatus** E. Hitch.*Hitchcock, E.* 1858 A, p. 116, pl. xx, fig. 11; pl. xxiv, fig. 3.Type *S. curvatus* E. Hitch.*Hitchcock, C. H.* 1889 B, p. 119.

Triassic; Massachusetts.

STEROPOIDES E. Hitch. Type not indicated.

Hitchcock, E. 1845 B, p. 24.

Edwards, A. Milne 1863 A, p. 136. (Tridentipes.)

1869 A, p. 672. (Tridentipes.)

Hitchcock, E. 1848 A, p. 182. (Steropezoum.)

1858 A, p. 88. (Tridentipes, to replace Steropezoum.)

Lydekker, R. 1890 A, p. 222. (Tridentipes.)

Steropoides elegans E. Hitch.*Hitchcock, E.* 1845 B, p. 24. (*S. elegans*, *S. elegantior*.)

Giebel, C. G. 1847 B, p. 36. (Ornithichnites.)

Hitchcock, C. H. 1889 B, p. 118. (Tridentipes.)*Hitchcock, E.* 1836 A, p. 320. (Ornithichnites diversus); p. 321 (*O. diversus platydactylus*).1841 A, p. 491, pl. xli, fig. 28, 29; pl. xlviii, figs. 57-62 (*Ornithoidichnites elegans*); pl. 493, pl. xlii, fig. 30; pl. xlviii, fig. 58 (*O. elegantior*).1848 A, p. 183, pl. v, fig. 2 (*Steropezoum elegans*); p. 184, pl. v, fig. 3 (*S. elegantius*).

1858 A, p. 90, pl. xv, fig. 2; pl. xlv, fig. 6; pl. lii, figs. 8, 11. (Tridentipes.)

Pictet, F. J. 1853 A, p. 406. (Ornithichnites diversus.)

Triassic; Massachusetts.

Steropoides infelix nom. nov.

Hitchcock, C. H. 1889 B, p. 118. (*Tridentipes elegantior*.)

Hitchcock, E. 1853 A, p. 90, pl. xv, fig. 3; pl. xlv, fig. 1. (*Tridentipes elegantior*, not *Steropezoum elegantius*, 1848.)

Triassic; Massachusetts.

Steropoides ingens E. Hitch.

Hitchcock, E. 1845 B, p. 24. (*S. ingens*, *Sillimanius adamsanus*.)

Cook, G. H. 1885 A, p. 96. (*Tridentipes*.)

Giebel, C. G. 1847 B, p. 35 (*Ornithichnites ingens*); p. 36 (*O. danæ*.)

Hitchcock, C. H. 1889 B, pp. 118, 122. (*Tridentipes*.)

Hitchcock, E. 1836 A, p. 319. (*Ornithichnites*.)

1841 A, p. 490, pl. xl, fig. 37. (*Ornithoidichnites*.)

1844 A, p. 306, pl. iii, fig. 5. (*O. danæ*.)

1848 A, p. 182, pl. v, fig. 1 (*Steropezoum ingens*); p. 191, pl. vii, fig. 5 (*Ornithopus adamsanus*).

1858 A, p. 89, pl. xv, fig. 1. (*Tridentipes*.)

Lesley, J. P. 1890 A, p. 1211, figure. (*Tridentipes*.)

Pictet, F. J. 1853 A, p. 406. (*Ornithichnites*.)

Quenstedt, F. A. 1852 A, p. 82. (*Ornithichnites*.)
Triassic; Massachusetts, New Jersey.

Steropoides loripes (E. Hitch.).

Hitchcock, E. 1848 A, p. 193, pl. vii, fig. 3. (*Ornithopus*.)

Hitchcock, C. H. 1889 B, p. 118. (*Tridentipes insignis*.)

Hitchcock, E. 1841 A, p. 495, pl. xlv, figs. 36, 37; pl. xlviii, fig. 63. (*Ornithoidichnites divaricatus*.)

1858 A, p. 91, pl. xv, fig. 4; pl. xlv, fig. 3; pl. xlvii, fig. 2. (*Tridentipes insignis*.)

Lesley, J. P. 1890 A, p. 1211, figure. (*Tridentipes*.)
Triassic; Massachusetts.

Steropoides uncus (E. Hitch.).

Hitchcock, E. 1858 A, p. 91, pl. xv, fig. 5; pl. xlv, fig. 1. (*Tridentipes*.)

Hitchcock, C. H. 1889 B, p. 118. (*Tridentipes uncus?*)

1863 B, p. 85. (*T. uncus*, doubtful species.)

Hitchcock, E. 1865 A, p. 20. (*Tridentipes*.)

Triassic; Massachusetts.

TARSODACTYLUS E. Hitch. Type *T. caudatus* E. Hitch.

Hitchcock, E. 1858 A, p. 98.

Tarsodactylus caudatus E. Hitch.

Hitchcock, E. 1858 A, p. 99.

Deane, J. 1861 A, p. 54, pl. xxxv.

Hitchcock, C. H. 1889 B, p. 118.

Triassic; Massachusetts.

Tarsodactylus expansus C. H. Hitch.

Hitchcock, C. H. 1866 A, p. 301.

1889 B, p. 118.

Triassic; Massachusetts.

THENAROPUS King. Type not named; *T. leptodactylus* may be assumed.

King, A. T. 1844 A, p. 177.

Amer. Jour. Science 1845 C, (Spheropezium.)

Hitchcock, E. 1848 A, p. 218.

King, A. T. 1845 A, p. 343. (Spheropezopus.)

1845 C, (Spheropezium.)

Lyell, C. 1846 A, p. 25. (No name.)

Miller, S. A. 1889 A, p. 626. (Sphæropezium, *Thenaropus*.)

Zittel, K. A. 1890 B, p. 411.

The tracks assigned to this genus are regarded by *Lyell* as being artifacts.

Thenaropus leptodactylus King.

King, A. T. 1844 A, p. 177, fig. 3.

Amer. Jour. Science 1845 C, p. 345. (Spheropezium.)

King, A. T. 1845 A, p. 345, fig. 3. (Spheropezopus.)

1845 C, p. 216, fig. 2. (Spheropezium.)

Coal-measures; Pennsylvania.

Thenaropus ovoidactylus King.

King, A. T. 1844 A, p. 178, fig. 7.

Amer. Jour. Science 1845 C, p. 347. (Spheropezium.)

King, A. T. 1845 A, p. 347, fig. 6. (Spheropezopus.)
Coal-measures; Pennsylvania.

Thenaropus pachydactylus King. ✓

King, A. T. 1844 A, p. 177, fig. 4.

Amer. Jour. Science 1845 C, p. 346. (Spheropezium.)

King, A. T. 1845 A, p. 346, fig. 4. (Spheropezopus.)
1845 C, p. 216, fig. 1. (Spheropezium.)

Coal-measures; Pennsylvania.

Thenaropus sphærodactylus King. ✓

King, A. T. 1844 A, p. 177, figs. 5, 6.

Amer. Jour. Science 1845 C, p. 346. (Spheropezium *thærodactylum*.)

King, A. T. 1845 A, p. 346, figs. 5a, 5b. (Spheropezopus *thærodactylum*.)

1845 C, fig. 3. (Spheropezium *thærodactylum*.)

Coal-measures; Pennsylvania.

THINOPUS Marsh. Type *T. antiquus* Marsh.

Marsh, O. C. 1896 G, p. 374.

Thinopus antiquus Marsh.

Marsh, O. C. 1896 G, p. 374, figure.
Devonian; Pennsylvania.

TOXICHNUS E. Hitch. Type *T. inæqualis* E. Hitch.*Hitchcock*, *E.* 1865 A, p. 12.**Toxichnus inæqualis** E. Hitch.*Hitchcock*, *E.* 1865 A, p. 12, pl. v, fig. 5.*Hitchcock*, *E.* 1889 B, p. 119.

Triassic; Massachusetts.

TRIÆNOPUS E. Hitch. Type *T. baileyanus* E. Hitch.*Hitchcock*, *E.* 1845 B, p. 24.

1848 A, p. 202.

1858 A, p. 111.

Warren, J. C. 1854 A, p. 30.

Triænopus baileyanus E. Hitch.*Hitchcock*, *E.* 1845 B, p. 24. (*T. baileyanus*, *T. emmonsianus*.)*Hitchcock*, C. H. 1889 B, pp. 119, 122. (*T. leptodactylus*.)*Hitchcock*, *E.* 1841 A, p. 479, pl. xxx, figs. 4-6. (*Sauroidichnites emmonsii*); p. 480, pl. xxxii, figs. 8, 9 (*S. baileyi*).*Hitchcock*, *E.* 1848 A, p. 203, pl. x, fig. 4 (*T. baileyanus*); p. 204, pl. x, fig. 5 (*T. emmonsianus*).1858 A, p. 111, pl. xix, figs. 1-9; pl. xx, figs. 1-3; pl. xlv, fig. 8; pl. lii, fig. 1. (*T. leptodactylus*.)Warren, J. C. 1854 A, p. 31. (*T. baileyanus*, *T. emmonsianus*.)

Triassic; Connecticut.

TRIHAMUS E. Hitch. Type *T. elegans* E. Hitch.*Hitchcock*, *E.* 1865 A, p. 9.

Triassic; Massachusetts.

Trihamus elegans E. Hitch.*Hitchcock*, *E.* 1865 A, p. 9, pl. ii, fig. 3.*Hitchcock*, C. H. 1889 B, p. 118.*Hitchcock*, *E.* 1863 B, p. 86. (No description.)

Triassic; Connecticut.

Trihamus magnus C. H. Hitch.*Hitchcock*, C. H. 1889 B, pp. 118, 126.

Triassic; Connecticut.

TYPOPUS E. Hitch. Type *T. abnormis* E. Hitch.*Hitchcock*, *E.* 1845 B, p. 25.

1848 A, p. 212.

1858 A, p. 105.

Typopus abnormis E. Hitch.*Hitchcock*, *E.* 1845 B, p. 25.*Hitchcock*, C. H. 1889 B, p. 119, 122.*Hitchcock*, *E.* 1844 A, pp. 294, 307, pl. iii, figs. 6-8. (*Sauroidichnites*.)*Hitchcock*, *E.* 1848 A, p. 212, pl. x, fig. 6.

1858 A, p. 105, pl. xvii, fig. 9; pl. xlv, fig. 7.

Triassic; Massachusetts, Connecticut.

Typopus gracilis E. Hitch.*Hitchcock*, *E.* 1858 A, p. 106, pl. xvii, fig. 10.*Hitchcock*, C. H. 1889 B, p. 119.

Triassic; Connecticut.

XIPHOPENA E. Hitch. Type *X. triplex* E. Hitch.*Hitchcock*, *E.* 1848 A, p. 239.

1858 A, p. 113.

Xiphopena triplex E. Hitch.*Hitchcock*, *E.* 1858 A, p. 113, pl. xx, fig. 6; pl. lii, figs. 3, 4, 6.

Deane, J. 1861 A, p. 45, pl. xxiv, fig. 2.

Hitchcock, C. H. 1889 B, p. 119.

Triassic; Massachusetts.

Class MAMMALIA Linn.

Linnaeus, *C.*, 1758, *Syst. Nat.*, ed. 10, i, p. 14.

Albrecht, P. 1886 A.

Allen, H. 1882 A.

Ameghino, F. 1891 D, p. 282.

1896 A.

1898 B.

1899 A, p. 555.

Baird, S. F. 1857 A.

Baur, G. 1884 C.

1884 D.

1885 G.

1885 H.

Baur, G. 1886 A.

1886 B.

1889 D.

1891 C, p. 354.

1892 D, p. 210.

1894 A.

Baur and Case 1897 A.

Bemmelen, J. F. 1899 A, p. 162.

Branco, W. 1897 A.

Cope, E. D. 1871 B, p. 196.

1873 E, p. 645.

1874 M.

- Cope, E. D. 1880 B, p. 53.
 1881 J.
 1882 A.
 1883 M, p. 562.
 1884 E.
 1884 I, p. 43.
 1884 K, p. 323.
 1884 L, p. 324.
 1884 O, p. 166.
 1884 FF.
 1884 HH.
 1884 II.
 1885 A.
 1885 G.
 1887 S, pp. 241, 317, 341.
 1889 C.
 1889 R.
 1891 N, p. 64.
 1893 M.
 1898 B, p. 101.
 Dawkins, W. B. 1870 A.
 1880 A.
 Dobson, G. E. 1885 A.
 Fleischman, A. 1891 A.
 Flower, W. H. 1869 A.
 1876 B.
 1876 C.
 1883 A.
 1883 D.
 1885 A.
 Flower and Lydekker 1891 A.
 Frenkel, F. 1873 A.
 Fürbringer, M. 1885 B.
 Gadow, H. 1889 A, p. 474.
 1896 A, p. 42.
 1898 A, p. 39.
 Gaupp, E. 1894 A.
 Gegenbaur, C. 1864 A.
 1865 B.
 1898 A.
 Gill, T. 1871 A.
 1872 A.
 Goodrich, E. S. 1894 E.
 Haacke, W. 1888 A, p. 8.
 1893 A, p. 719.
 Haeckel, E. 1895 A, p. 419
 Hallmann, E. 1837 A.
 Hoffmann, C. K. 1879 A, p. 31.
 Howes, G. B. 1887 B.
 1893 A.
 1896 A.
 Humphrey, G. M. 1866 A.
 Humphreys, J. 1889 A, p. 137.
 Huxley, T. H. 1870 A.
 1872 A, p. 273.
 1876 B, xiv, p. 33.
 1880 B.
 Kehner, F. A. 1876 A.
 Kehler, G. 1886 A, p. 83.
 Kingsley and Ruddick 1900 A, p. 219.
 Köstlin, O. 1844 A.
 Kollmann, J. 1888 A.
 Kükenthal, W. 1890 C.
 1892 A.
 1892 B.
 1895 B.
 Landois, — 1881 A, p. 125.
 Lataste, F. 1889 A.
 Leboucq, H. 1896 A.
 Leche, W. 1893 A.
 1893 B.
 1895 A.
 1896 A.
 1896 B.
 Lemoine 1893 A.
 Lydekker, R. 1885 B.
 1885 C.
 1886 A.
 1886 B.
 1887 A.
 Maggi, L. 1898 B.
 1898 C.
 1898 D.
 Marsh, O. C. 1877 E.
 1885 C.
 1887 A.
 1891 H.
 1893 B.
 Mehnert, E. 1889 A.
 Nicholson and Lydekker 1889 A, p. 1245.
 Osborn, H. F. 1887 D.
 1888 E.
 1888 F.
 1892 E.
 1892 I.
 1893 A.
 1893 D.
 1893 G.
 1897 C.
 1898 A.
 1898 B.
 1898 L.
 1898 O, p. 175.
 1898 R, p. 309.
 1900 J, p. 943.
 Owen, R. 1843 A.
 1845 B, p. 296.
 1851 C.
 1858 A.
 1868 A.
 Parker, W. K. 1868 A, p. 192.
 1874 B.
 1879 B.
 1885 A.
 1886 A.
 Parsons, F. G. 1899 A.
 1900 A.
 Pollard, E. C. 1893 A
 Reh, L. 1895 A.
 Römer, F. 1893 A.
 Röse, C. 1892 A.
 1892 D.
 1892 E.
 1893 C.
 1895 A.
 1896 A.
 Roger, O. 1889 A.
 1896 A.
 Rüttimeyer, L. 1877 A.
 1888 A.
 1891 A.
 1892 A.
 Schlosser, M. 1888 A.
 1889 A.

Schlosser, M. 1890 A.

1890 C.

1890 D.

1892 A.

1893 A.

Schmidt, O. 1886 A.

Schwalbe, G. 1894 A.

Scott, W. B. 1891 B, p. 378.

1891 C.

1892 A.

1892 C.

1899 B, p. 92.

Seeley, H. G. 1888 D, p. 106.

1888 E.

1888 H.

1898 A, p. 357.

Slade, D. D. 1888 A.

Smith, J. 1895 A.

Steinmann and Döderlein 1890 A, p. 678.

Thilenius, G. 1894 A.

Thomas, O. 1888 A.

Thomas, O. 1890 A.

1892 B.

Thompson, J. A. 1897 A, p. 41.

Tomes, C. S. 1898 A, p. 299.

Tornier, G. 1886 A.

1888 A.

1890 A.

Trouessart, E. L. 1889 A.

1898 A.

1899 A.

Turner, H. N. 1848 A.

Weber, Max 1887 A.

1893 A.

1893 B.

Weyhe, — 1875 A.

Woodward, A. S. 1898 B, p. 245.

Woodward, M. F. 1892 A.

1893 A.

1896 A.

Zittel, K. A. 1893 A.

1893 B.

Subclass PROTOTHERIA Gill.

Gill, T. 1872 B, p. vi (Prototheria); pp. 27, 46
(Ornithodelphia).

Cope, E. D. 1887 Q.

1889 R, pp. 873, 874.

1891 N, p. 377.

1898 B, p. 102.

Flower, W. H. 1883 A.

1883 D, p. 377.

1885 A. (Ornithodelphia.)

Flower and Lydekker 1889 A, p. 117.

Gadow, H. 1893 A, p. 39.

Gill, T. 1888 A.

Haeckel, E. 1895 A, p. 468. (Monotrema in part.)

Huxley, T. H. 1872 A, p. 274. (Ornithodelphia.)

1880 B.

Osborn, H. F. 1893 A, p. 391.

1899 B, p. 92.

Parker, W. K. 1885 A, p. 25.

Steinmann and Döderlein 1890 A, p. 696.

Tomes, C. S. 1898 A, p. 300.

Wilson and Hill 1897 A, p. 429.

Woodward, A. S. 1898 B, p. 248.

Zittel, K. A. 1893 B, p. 61. (Eplacentalia.)

Order PROTODONTA Osborn.

Osborn, H. F. 1887 E.

Cope, E. D. 1889 R, p. 874.

1891 N, pp. 64, 66.

1898 B, p. 102.

Gadow, H. 1898 A, p. 40.

Haeckel, E. 1895 A, p. 470. (Dromatheridæ.)

Hay, O. P. 1899 F, p. 682.

Osborn, H. F. 1888 G, p. 222.

Zittel, K. A. 1893 B, p. 96.

DROMATHERIIDÆ.

Gill, T. 1872 B, p. 27.

Cope, E. D. 1889 R, p. 874.

1898 B, p. 102.

Marsh, O. C. 1887 A, p. 344.

Nicholson and Lydekker 1889 A, p. 1272.

Osborn, H. F. 1887 F, p. 291.

1888 G, p. 222.

Steinmann and Döderlein 1890 A, p. 697.

DROMATHERIUM Emmons. Type *D. sylvestre* Emmons.

Emmons, E. 1857 A, p. 93.

Ameghino, F. 1896 A.

Emmons, E. 1858 A, p. 78. (No description.)

1860 A, p. 175.

Flower and Lydekker 1891 A, p. 113.

Goodrich, E. S. 1894 A, p. 426.

Leidy, J. 1857 B, p. 150.

1869 A, p. 410.

1870 F.

Lydekker, R. 1887 A, p. 269.

Marsh, O. C. 1891 I, p. 237.

Nicholson and Lydekker 1889 A, p. 1272.

Osborn H. F. 1886 B.

1887 D.

1887 E.

1887 F, p. 291.

1888 B.

1888 F, p. 1067.

1888 G, pp. 222, 239.

1891 C, p. 776.

1892 I.

1893 D.

1895 C. p. 6.

Owen, R. 1860 E, p. 302

- Schlosser, M. 1890 C, p. 242, fig. I, 1.
 Scott, W. B. 1892 A, p. 405.
 Winge, H. 1893 C, p. 75.
 Woodward, A. S. 1898 B, p. 256.
 Zittel, K. A. 1890 B, p. 96.

Authors previously to 1886 included *Microconodon* in this genus.

Dromatherium sylvestre Emmons.

- Emmons, E. 1857 A, p. 93, fig. 66.
 Cope, E. D. 1875 V, p. 51.
 Edwards, A. M. 1895 A. (Identification doubtful.)
 Emmons, E. 1860 A, p. 175, fig. 152.
 Flower, W. H. 1883 D, p. 375.
 Leidy, J. 1859 G.
 1869 A, p. 410.

Leidy, J. 1870 F.

Osborn, H. F. 1886 A.

1886 B, p. 360.

1887 E.

1888 G, pl. ix, fig. 77.

1891 C, p. 777.

1895 C, p. 6, pl. AA, fig. 2. ("Dromatherium.")

Trouessart, E. L. 1898 A, p. 1252.

Roger, O. 1896 A, p. 12.

Woodward, A. S. 1890 A, p. 393.

Zittel, K. A. 1893 B, p. 96, fig. 73.

Triassic; North Carolina, New Jersey?

Authors writing before 1886 included *Microconodon tenuirostris* Osb. in this species.

MICROCONODON Osborn. Type *M. tenuirostris* Osborn.

- Osborn, H. F. 1886 A.
 Ameghino, F. 1896 A.
 Cope, E. D. 1888 R.
 Goodrich, E. S. 1894 A, p. 429.
 Marsh, O. C. 1891 I, p. 612.
 Nicholson and Lydekker 1889 A, p. 1273.
 Osborn, H. F. 1886 B, p. 362.
 1887 D.
 1887 E.
 1888 F, p. 1073.
 1888 G, p. 223.
 1891 C, p. 777.
 1892 I.
 1893 G, p. 496.
 1895 C, p. 3.
 1898 R, p. 353.

Schlosser, M. 1890 C, p. 242, fig. I, 2.

Winge, H. 1893 C, p. 76.

Woodward, A. S. 1898 B, p. 256.

Zittel, K. A. 1893 B, p. 97.

Before the year 1886 included in *Dromatherium*.

Microconodon tenuirostris Osborn.

- Osborn, H. F. 1886 A.
 Cope, E. D. 1888 R, pl. xiv.
 Osborn, H. F. 1886 B, p. 362.
 1888 G, p. 223, fig. A, 10, B.
 1898 R, p. 353, fig. 14.
 Roger, O. 1896 A, p. 12.
 Seeley, H. G. 1895 B, p. 89.
 Trouessart, E. L. 1898 A, p. 1252.
 Triassic; North Carolina.

Order ALLOTHERIA Marsh.

Marsh, O. C. 1880 F, p. 239.

Most of the authors below cited employ Cope's name *Multituberculata* for this group. Citations of such authors are followed by the contraction (Mult.).

Ameghino, F. 1894 A, p. 332. (Mult.)

Cope, E. D. 1884 O, p. 167. (Allotheria.)

1884 Y, p. 687. (Mult.)

1888 J. (Mult.)

1888 K. (Mult.)

1888 M. (Mult.)

1888 R. (Mult.)

1888 CC, p. 302. (Mult.)

1889 C. (Mult.)

1889 R, p. 874. (Mult.)

1891 N, p. 65. (Mult.)

1898 B, p. 102. (Mult.)

Flower and Lydekker 1891 A, p. 109. (Mult.)

Gadow, H. 1898 A, p. 39.

Goodrich, E. S. 1894 A, p. 429.

Haeckel, E. 1895 A, p. 476.

Hay, O. P. 1899 F, p. 682.

Lydekker, R. 1887 A, p. 195. (Mult.)

Major, Fors. 1893 A, p. 210.

Marsh, O. C. 1887 A, p. 345.

1889 D, p. 83.

Marsh, O. E. 1891 H.

1891 I, p. 239.

1892 B.

Matthew, W. D. 1899 A, p. 28. (Mult.)

Nicholson and Lydekker 1889 A, p. 1266. (Mult.)

Osborn, H. F. 1887 F, pp. 284-285. (Mult.)

1888 B, p. 75. (Mult.)

1888 C, p. 232. (Mult.)

1888 E, p. 926. (Mult.)

1888 F, p. 1068. (Mult.)

1888 G. (Mult.)

1891 A. (Mult.)

1891 C, p. 778. (Mult.)

1891 E, p. 599. (Mult.)

1893 B, p. 313. (Mult.)

1893 D. (Mult.)

1897 C. (Mult.)

1898 O. (Mult.)

Owen, R. 1884 A. (Mult.)

Roger, O. 1896 A, p. 3. (Allotheria.)

Schlosser, M. 1890 C, p. 276. (Mult.)

Steinmann and Döderlein 1890 A, p. 698. (Mult.)

Trouessart, E. L. 1898 A, p. 1253.

Woodward, A. S. 1898 B, p. 248. (Mult.)

Zittel, K. A. 1893 B, p. 72.

BOLODONTIDÆ.

Osborn, H. F. 1887 F, p. 285.

Cope, E. D. 1887 H, p. 567. (Chirogidae.)

1888 J. (Chirogidae.)

1888 CC, p. 307. (Chirogidae.)

1898 B, p. 102. (Chirogidae.)

Haeckel, E. 1895 A, p. 470. (Bolodontida.)

Lydekker, R. 1887 A, p. 202.

Marsh, O. C. 1887 A, p. 329. (Bolodon.)

Nicholson and Lydekker 1889 A, p. 1269

Osborn, H. F. 1887 A. (Bolodon.)

Osborn, H. F. 1888 C, p. 233.

1888 G, pp. 213, 251.

1891 B, p. 44. (Allodontidae.)

Owen, R. 1871 A, p. 54. (Bolodon.)

Roger, O. 1896 A, p. 4.

Steinmann and Döderlein 1890 A, p. 699.

Trouessart, E. L. 1898 A, p. 1258.

Woodward, A. S. 1898 B, p. 251. (Bolodon.)

Zittel, K. A. 1893 B, p. 77.

ALLACODON Marsh. Type *A. lentus* Marsh.

Marsh, O. C. 1889 F, p. 178.

Osborn, H. F. 1891 B.

1893 B, pp. 314, 315, 317.

Trouessart, E. L. 1898 A, p. 1258.

Zittel, K. A. 1893 B, p. 79.

Allacodon fortis Marsh.

Marsh, O. C. 1892 B, p. 255, pl. vii, fig. 4.

Roger, O. 1896 A, p. 4.

Trouessart, E. L. 1898 A, p. 1258.

Walcott, C. D. 1900 A, p. 23.

Cretaceous (Laramie); Wyoming.

Allacodon lentus Marsh.

Marsh, O. C. 1889 F, p. 178, pl. viii, figs. 17-31.

1897 C, p. 521, fig. 89.

Osborn, H. F. 1891 A, p. 130, fig. 7.

1891 B, p. 45.

1891 E, p. 604, fig. 9.

Roger, O. 1896 A, p. 4.

Trouessart, E. L. 1898 A, p. 1258.

Cretaceous (Laramie); Wyoming.

Allacodon pumilis Marsh.

Marsh, O. C. 1889 F, p. 179.

1892 B, p. 255, pl. vii, fig. 3.

Osborn, H. F. 1891 A, p. 131.

1891 E, p. 604.

Roger, O. 1896 A, p. 4.

Trouessart, E. L. 1898 A, p. 1258.

Walcott, C. D. 1900 A, p. 23.

Zittel, K. A. 1893 B, p. 79, fig. 49.

Cretaceous (Laramie); Wyoming.

Allacodon rarus Marsh.

Marsh, O. C. 1892 B, p. 256, pl. vii, fig. 5.

Roger, O. 1896 A, p. 4.

Trouessart, E. L. 1898 A, p. 1258.

Cretaceous (Laramie); Wyoming.

ALLODON Marsh. Type *A. laticeps* Marsh.

Marsh, O. C. 1881 F, p. 511.

Lydekker, R. 1887 A, p. 203. (=? Bolodon.)

1893 A. (Syn.? of Bolodon.)

Nicholson and Lydekker 1889 A, p. 1270.

Marsh, O. C. 1887 A, p. 329.

Osborn, H. F. 1887 A.

1888 C, p. 233.

1888 G, pp. 218, 251.

Osborn and Earle 1895 A, p. 5.

Schlosser, M. 1890 C, p. 275.

Steinmann and Döderlein 1890 A, p. 699.

Trouessart, E. L. 1898 A, p. 1258.

Winge, H. 1893 C, p. 77. (Allodon, Bolodon.)

Zittel, K. A. 1893 B, pp. 78, 722.

Roger, O. 1896 A, p. 4.

Trouessart, E. L. 1898 A, p. 1258.

Woodward, A. S. 1898 B, p. 250, fig. 147.

Zittel, K. A. 1893 B, p. 78, fig. 48 A, B, C.

Jurassic; Wyoming.

Allodon laticeps Marsh.

Marsh, O. C. 1881 F, p. 511.

1887 A, p. 331, pl. vii, figs. 1-6.

Osborn, H. F. 1888 G, p. 217, fig. 10.

Roger, O. 1896 A, p. 4.

Trouessart, E. L. 1898 A, p. 1258.

Zittel, K. A. 1893 B, p. 78, fig. 48 D, E, F.

Jurassic; Wyoming.

Allodon fortis Marsh.

Marsh, O. C. 1887 A, p. 331, pl. vii, figs. 7-10.

CHIROX Cope. Type *C. plicatus* Cope.

Cope, E. D. 1884 K, p. 321.

1887 H.

1888 I, p. 10.

1889 L.

Matthew, W. D. 1897 C, p. 265.

Nicholson and Lydekker 1889 A, p. 1269.

Osborn, H. F. 1887 F, p. 286.

1888 G p, 219.

Osborn, H. E. 1893 D.

Winge, H. 1893 C, p. 77.

Zittel, K. A. 1893 B, p. 79.

Chirox plicatus Cope.

Cope, E. D. 1884 K, p. 321.

1887 H.

1888 I, p. 10, fig. 7.

- Cope, E. D. 1888 CC, p. 302.
 1889 C, p. 269, fig. 91.
 1898 B, p. 104, fig. 42.
 Matthew, W. D. 1897 C, p. 263.
 1899 A, p. 29.

- Osborn, H. F. 1889 G, p. 219, fig. 12.
 1891 E, p. 606, fig. 11.
 Roger, O. 1896 A, p. 4.
 Trouessart, E. L. 1898 A, p. 1258.
 Eocene (Torrejon); New Mexico.

PLAGIAULACIDÆ.

- Gill, T. 1872 B, p. 27.
 Ameghino, F. 1889 A, p. 268. (Plagiaulacoidea, in part; Plagiaulacida.)
 1891 B, p. 38.
 Cope, E. D. 1882 U.
 1882 W.
 1884 O, p. 167.
 1884 Y, p. 687.
 1888 J.
 1888 CC, p. 307.
 1889 R, p. 874.
 1898 B, p. 102.
 Haeckel, E. 1895 A, p. 470. (Plagiaulacida.)
 Lydekker, R. 1887 A, p. 195.
 Marsh, O. C. 1879 G, p. 397.
 1880 F, p. 239.
 1881 F, p. 512.
 1887 A, pp. 329, 344.
 1889 D, p. 84 (Cimolodontidæ); p. 85 (Dipriodontidæ); p. 86 (Triodontidæ).

- Marsh, O. C. 1889 F, p. 177. (Cimolomidæ.)
 1891 I, p. 239.
 Matthew, W. D. 1899 A, p. 28.
 Nicholson and Lydekker 1889 A, p. 1267.
 Osborn, H. F. 1887 F, p. 285.
 1888 G, p. 213.
 1891 B. (Plagiaulacida, Stereognathidæ.)
 1891 C, p. 781.
 1892 D.
 1893 B.
 1893 D.
 1893 G, p. 214.
 Roger, O. 1896 A, p. 4.
 Schlosser, M. 1884 B, p. 640.
 1888 A, p. 584.
 Steinmann and Döderlein 1890 A, p. 700.
 Winge, H. 1893 C, p. 77.
 Woodward, A. S. 1898 B, p. 249.
 Zittel, K. A. 1893 B, p. 79.

PLAGIAULACINÆ.

- Osborn and Earle 1895 A, p. 11.

PLAGIAULAX Falconer. Type *P. beeklesii* Falconer.

Falconer, H. 1857 A.

This genus being the type of the family *Plagiaulacidae*, the following references to its literature are given, although no species are known from our region.

- Ameghino, F. 1891 A, p. 40.
 Cope, E. D. 1882 U, p. 416.
 1882 W, p. 520.
 1884 O, p. 168.
 1884 Y, p. 691.
 Falconer, H. 1862 A.
 1868 A, ii, p. 408, pls. xxiii, xxiv.

- Lemoine, V. 1882 A.
 Lydekker, R. 1887 A, p. 196.
 1893 A.
 Nicholson and Lydekker 1889 A, p. 1267.
 Osborn, H. F. 1888 C.
 1888 G, p. 215.
 Owen, R. 1871 A, p. 75.
 Schlosser, M. 1890 C, p. 277.
 Seeley, H. 1888 H, p. 141.
 Winge, H. 1893 C, p. 78.
 Woodward, A. S. 1898 B, p. 249.
 Zittel, K. A. 1893 B, p. 80.

CTENACODON Marsh. Type *C. serratus* Marsh.

- Marsh, O. C. 1879 G, p. 396.
 Cope, E. D. 1882 U, p. 416.
 1882 W, p. 521.
 1884 O, p. 168.
 1884 Y, p. 691.
 1888 J.
 Lydekker, R. 1893 A.
 Marsh, O. C. 1885 C.
 1887 A, p. 332.
 Nicholson and Lydekker 1889 A, p. 1267.
 Osborn, H. F. 1887 F, p. 285.
 1888 G, p. 215.
 1893 A.
 1893 B, p. 314.
 Schlosser, M. 1890 C, p. 277.
 Trouessart, E. L. 1898 A, p. 1254.
 Winge, H. 1893 C, p. 77.

- Woodward, A. S. 1898 B, p. 251.
 Wortman, J. L. 1885 A, p. 299.
 Zittel, K. A. 1893 B, pp. 81, 722.

Ctenacodon nanus Marsh.

- Marsh, O. C. 1881 F, p. 512.
 Roger, O. 1896 A, p. 4.
 Trouessart, E. L. 1898 A, p. 1254.
 Jurassic; Wyoming.

Ctenacodon potens Marsh.

- Marsh, O. C. 1887 A, p. 333, pl. viii, figs. 2, 3, 7-9.
 Osborn, H. F. 1891 E, p. 604, fig. 8a.
 Roger, O. 1896 A, p. 4.
 Trouessart, E. L. 1898 A, p. 1254.
 Woodward, A. S. 1898 B, p. 250, fig. 147.
 Jurassic; Wyoming.

Ctenacodon serratus Marsh.

- Marsh, O. C. 1879 G, p. 396.
 Cope, E. D. 1884 Y, p. 693, fig. 7.
 1888 J, fig. 9a.
 1889 C, p. 270, fig. 93a.
 Marsh, O. C. 1880 F, p. 238, figure.
 1887 A, p. 333, pl. viii, figs. 1, 4-6.

- Marsh, O. C. 1897 C, p. 508, fig. 70.
 Osborn, H. F. 1888 G, p. 216, fig. 8.
 Roger, O. 1896 A, p. 4.
 Trouessart, E. L. 1898 A, p. 1254.
 Woodward, A. S. 1898 B, p. 250, fig. 147.
 Zittel, K. A. 1893 B, p. 80, figs. 53, 54.
 Jurassic; Wyoming.

NEOPLAGIAULAX Lemoine.

- Lemoine, V. 1863 A.
 Cope, E. D. 1887 H, p. 567.
 Lemoine, V. 1891 A, p. 289.
 Lydekker, R. 1887 A, p. 196.
 Marsh, O. C. 1887, A, p. 344.
 Matthew, W. D. 1897 C, p. 265.
 Nicholson and Lydekker 1889 A, p. 1267.
 Osborn, H. F. 1891 C, p. 781.
 1892 I.
 Roger, O. 1896 A, p. 6.
 Schlosser, M. 1890 C, p. 277.
 Winge, H. 1893 C, p. 78.
 Zittel, K. A. 1893 B, p. 84.

Neoplagiaulax americanus Cope.

- Cope, E. D. 1885 M, p. 493.
 1886 I, p. 451.

Type *N. eocænus* Lemoine.

- Cope, E. D. 1888 CC, p. 302.
 Matthew, W. D. 1897 C, p. 263.
 1899 A, p. 28.
 Osborn and Earle 1895 A, p. 7.
 Roger, O. 1896 A, p. 6.
 Trouessart, E. L. 1898 A, p. 1257.
 Eocene (Puerco); New Mexico.

Neoplagiaulax molestus Cope.

- Cope, E. D. 1869 I.
 1888 CC, p. 307, pl. v, figs. 10, 11.
 Matthew, W. D. 1897 C, p. 263.
 1899 A, p. 28.
 Osborn and Earle 1895 A, p. 6. (Chirox.)
 Roger, O. 1896 A, p. 6.
 Trouessart, E. L. 1898 A, p. 1257.
 Eocene (Torrejon); New Mexico.

PTILODUS Cope. Type *P. mediævus* Cope.

- Cope, E. D. 1881 V.
 1882 U, p. 416.
 1882 W, p. 520.
 1884 O, pp. 168, 172.
 1884 Y, p. 691.
 1888 J, p. 12.
 Lydekker, R. 1887 A, p. 196.
 Nicholson and Lydekker 1889 A, p. 1267.
 Osborn, H. F. 1888 G, p. 217.
 1891 A, p. 134.
 1893 B, p. 314, pl. vii, figs. 1-6, text figs. 1, 2.
 1893 D, p. 30.
 Winge, H. 1893 C, p. 78.
 Woodward, A. S. 1898 B, p. 252.
 Zittel, K. A. 1893 B, p. 83.

Ptilodus mediævus Cope.

- Cope, E. D. 1881 V.
 1882 W, p. 522.
 1884 O, p. 173, pl. xxiii d, fig. 1.
 1884 Y, p. 696, fig. 8.

- Cope, E. D. 1888 CC, p. 302.
 1898 B, p. 104, fig. 41.
 Lydekker, R. 1887 A, p. 196, fig. 30.
 Matthew, W. D. 1897 C, p. 263.
 1899 A, p. 28.
 Osborn and Earle 1895 A, p. 7.
 Roger, O. 1896 A, p. 5.
 Trouessart, E. L. 1898 A, p. 1256.
 Eocene (Torrejon); New Mexico.
Ptilodus trouessartianus Cope.
 Cope, E. D. 1882 AA, p. 686.
 1884 O, p. 737, pl. xxvf, fig. 19.
 1885 M, p. 493.
 1888 CC, p. 302.
 Matthew, W. D. 1897 C, p. 263.
 1899 A, p. 28.
 Osborn, H. F. 1893 B, p. 315, text fig. 1.
 Roger O. 1896 A, p. 5.
 Trouessart, E. L. 1898 A, p. 1256.
 Eocene (Torrejon); New Mexico.

CIMOLOMYS Marsh. Type *C. gracilis* Marsh.

- Marsh, O. C. 1889 D, p. 84.
 Cope, E. D. 1892 U, p. 762. (Cimolodon.)
 Marsh, O. C. 1889 D, p. 84 (Cimolodon, type *C. nitidus*); p. 85 (Nanomys, type *N. minutus*).
 1892 B, p. 261. (Nanomyops, to replace Nanomys.)
 Nicholson and Lydekker 1889 A, p. 1268.
 Osborn, H. F. 1891 A, p. 125.
 1891 B.
 1893 B, p. 314. (Ptilodus.)
 Steinmann and Döderlein 1890 A, p. 700.
 Trouessart, E. L. 1898 A, p. 1256.
 Zittel, K. A. 1893 B, p. 82.

Cimolomys agilis (Marsh).

- Marsh, O. C. 1889 B, p. 255, pl. vi, fig. 8. (Cimolodon.)
 Roger, O. 1896 A, p. 6.
 Trouessart, E. L. 1898 A, p. 1257.
 Walcott, C. D. 1900 A, p. 23. (Cimolodon.)
 Cretaceous (Laramie); Wyoming.

Cimolomys bellus Marsh.

- Marsh, O. C. 1889 D, p. 84.
 1892 B, p. 262, pl. vii, fig. 2.
 Osborn, H. F. 1891 A, p. 125. (Syn. of *C. gracilis*.)

Osborn, H. F. 1891 B, p. 44.

1891 E, p. 599.

1893 B, p. 316. (Ptilodus.)

Roger, O. 1896 A, p. 6.

Trouessart, E. L. 1898 A, p. 1256. (Syn. of *C. gracilis*.)

Cretaceous (Laramie); Wyoming.

Cimolomys digona Marsh.

Marsh, O. C. 1889 F, p. 177, pl. vii, figs. 1-4, 13-16.

1897 C, p. 521, fig. 87.

Osborn, H. F. 1891 A, p. 126.

1891 B, p. 44.

1891 E, p. 599.

1893 B, p. 317. (Ptilodus.)

Roger, O. 1896 A, p. 6.

Trouessart, E. L. 1898 A, p. 1256.

Cretaceous (Laramie); Wyoming.

Cimolomys formosus (Marsh).

Marsh, O. C. 1889 F, p. 179, pl. viii, figs. 32-39. (Halodon.)

Osborn, H. F. 1891 A, p. 126, fig. 1, c.

1891 B, p. 44.

1893 B, p. 315. (Ptilodus.)

Roger, O. 1896 A, p. 6.

Trouessart, E. L. 1898 A, p. 1257.

Zittel, K. A. 1893 B, p. 84, fig. 61, C. (Halodon.)

Cretaceous (Laramie); Wyoming.

Cimolomys gracilis Marsh.

Marsh, O. C. 1889 D, p. 84, pl. ii, figs. 1-4.

Osborn, H. F. 1891 A, p. 125, figs. 2, a, 3.

1891 B, p. 44.

1891 E, pp. 599, 601, figs. 3, 4.

1893 B, p. 317. (Ptilodus.)

Roger, O. 1896 A, p. 6.

Trouessart, E. L. 1898 A, p. 1256.

Zittel, K. A. 1893 B, p. 81, fig. 56.

Cretaceous (Laramie); Wyoming.

Cimolomys minutus (Marsh).

Marsh, O. C. 1889 D, p. 85, pl. ii, figs. 9-12. (Nanomys.)

1892 B, p. 261, pl. vi, fig. 2. (Nanomysops.)

Osborn, H. F. 1891 A, p. 126, figs. 2, c, 3.

1891 E, p. 600, figs. 3, 4.

1892 B, p. 44.

1893 B, p. 316.

Roger, O. 1896 A, p. 6.

Trouessart, E. L. 1898 A, p. 1256. (Syn. of *C. gracilis*.)

Cretaceous (Laramie); Wyoming.

Cimolomys nitidus (Marsh).

Marsh, O. C. 1889 D, p. 84, pl. ii, figs. 5-8. (Cimolodon.)

Cope, E. D. 1892 U, p. 762. (Cimolodon.)

Marsh, O. C. 1892 B, p. 255, pl. vi, figs. 7, 9. (Cimolodon.)

Osborn, H. F. 1891 A, p. 126, fig. 2, b. (Cimolodon.)

1891 B, p. 44. (Cimolomys.)

1891 E, p. 600, figs. 3, 4.

1893 B, p. 316. (Ptilodus.)

Roger, O. 1896 A, p. 6.

Trouessart, E. L. 1898 A, p. 1257. (Syn. of *C. gracilis*.)

Zittel, K. A. 1893 B, p. 82, figs. 57, 58.

Cretaceous (Laramie); Wyoming.

Cimolomys parvus (Marsh).

Marsh, O. C. 1892 B, p. 254, pl. vi, fig. 4. (Cimolodon.)

Roger, O. 1896 A, p. 6.

Trouessart, E. L. 1898 A, p. 1257.

Cretaceous (Laramie); Wyoming.

Cimolomys serratus (Marsh).

Marsh, O. C. 1889 D, p. 87, pl. iii, figs. 4-6, 14-17. (Halodon.)

Osborn, H. F. 1891 A, p. 126, figs. 1, b, 5, c. (Halodon.)

1891 B, p. 44.

1891 E, p. 600, fig. 2, 4.

1893 B, pp. 315, 318. (In part to Ptilodus; in part to Meniscoëssus.)

Roger, O. 1896 A, p. 6. (Halodon.)

Trouessart, E. L. 1898 A, p. 1257. (Syn. of *C. gracilis*.)

Cretaceous (Laramie); Wyoming.

MENISCOËSSUS Cope. Type *M. conquistus* Cope.

Cope, E. D. 1882 BB.

1884 Y, p. 691.

1888 J.

1889 L.

1892 U, p. 762. (Dipriodon=? Ptilodus.)

Marsh, O. C. 1889 D, p. 85 (Dipriodon, type *D. robustus*); p. 86 (Selenacodon, type *S. fragilis*; Triprionodon, type *T. calatus*); p. 87 (Halodon in part, type *H. sculptus*).

1891 I.

1892 D, p. 82.

1892 G, p. 174.

Nicholson and Lydekker 1889 A, p. 1268.

Osborn, H. F. 1887 F, p. 286.

1888 G, p. 217.

1891 A, p. 128.

1891 B.

1891 C, pp. 779, 782.

Osborn, H. F. 1891 E, pp. 597, 609.

1893 B, pp. 313, 317, 320. (Syn? of Paronychodon.)

1893 D, p. 30.

Schlosser, M. 1890 C, p. 277.

Trouessart, E. L. 1898 A, p. 1254.

Wortmann, J. L. 1883 A, p. 709.

1885 A, p. 296.

Zittel, K. A. 1893 B, p. 83.

Meniscoëssus brevis (Marsh).

Marsh, O. C. 1889 F, p. 177, pl. vii, figs. 9-12. (Selenacodon.)

Osborn, H. F. 1891 A, p. 129, fig. 5, d.

1891 B, p. 45.

1891 E, p. 602, fig. 5.

1893 B, p. 318.

Roger, O. 1896 A, p. 5. (Syn. of *M. conquistus*.)

Trouessart, E. L. 1898 A, p. 1255. (Syn. of *M. conquistus*.)

Cretaceous (Laramie); Wyoming.

Meniscoëssus caperatus (Marsh).

Marsh, O. C. 1889 D, p. 86, pl. iii, figs. 18-20. (Tripriondon.)

Dana, J. D. 1896 A, p. 853, fig. 1443. (Tripriondon.)

Marsh, O. C. 1892 B, p. 261, pl. v, fig. 2. (Tripriondon.)

Osborn, H. F. 1891 A, p. 129.

1891 B, p. 45.

1891 E, p. 602, fig. 8.

1893 B, p. 318.

Trouessart, E. L. 1898 A, p. 1255. (Syn. of *M. conquistus*.)

Cretaceous (Laramie); Wyoming.

Meniscoëssus cœlatus (Marsh).

Marsh, O. C. 1889 D, p. 86, pl. ii, figs. 19-21. (Tripriondon.)

Dana, J. D. 1896 A, p. 853, fig. 1442. (Tripriondon.)

Major, Fors. 1893 A, p. 211. (Tripriondon.)

Osborn, H. F. 1891 A, p. 129, fig. 4*b*.

1891 B, p. 45.

1891 E, p. 602, figs. 5, 8.

1893 B, p. 319.

Roger, O. 1896 A, p. 5. (Syn. of *M. conquistus*.)

Trouessart, E. L. 1898 A, p. 1255. (Syn. of *M. conquistus*.)

Zittel, K. A. 1893 B, p. 82, fig. 59B. (Tripriondon.)

Cretaceous (Laramie); Wyoming.

Meniscoëssus conquistus Cope.

Cope, E. D. 1882 BB.

1884 Y, p. 691, fig. 7.

1888 J.

1889 C, p. 270, fig. 93 *d, f*.

1889 L, p. 490.

Marsh, O. C. 1889 D, p. 82.

Osborn, H. F. 1891 B p. 45.

1891 E, p. 597 E, fig. 1.

1891 I.

1893 B, p. 319.

Osborn and Earle, 1895 A, p. 14.

Roger, O. 1896 A, p. 5.

Trouessart, E. L. 1898 A, p. 1255.

Zittel, K. A. 1893 B, p. 82, fig. 59 A.

Cretaceous (Laramie); Wyoming.

Meniscoëssus fragilis (Marsh).

Marsh, O. C. 1889 D, p. 86, pl. ii, figs. 22-24. (Selenacodon.)

Major, Fors. 1893 A, p. 211. (Selenacodon.)

Osborn, H. F. 1891 A, p. 128, figs. 4*c, 5, d, 6*.

1891 B, p. 45.

1891 E, p. 602, figs. 5, 8.

1893 B, p. 318.

Roger, O. 1896 A, p. 5. (Syn. of *M. conquistus*.)

Trouessart, E. L. 1898 A, p. 1255. (Syn. of *M. conquistus*.)

Cretaceous (Laramie); Wyoming.

Meniscoëssus lunatus (Marsh).

Marsh, O. C. 1889 D, p. 85, pl. ii, figs. 16-18. (Dipriondon.)

Cope, E. D. 1892 U, p. 762. (?*Ptilodus*.)

Dana, J. D. 1896 A, p. 853, fig. 1440. (Dipriondon.)

Marsh, O. C. 1892 B, p. 261, pl. v, figs. 6, 7. (Dipriondon.)

Osborn, H. F. 1891 A, pp. 128, 130, figs. 4*d, 6*. (Dipriondon.)

1891 E, p. 602, figs. 5, 8.

1893 B, p. 318.

Roger, O. 1896 A, p. 5. (Syn. of *M. conquistus*.)

Trouessart, E. L. 1898 A, p. 1255.

Zittel, K. A. 1893 B, p. 83, fig. 60A. (Dipriondon.)

Cretaceous (Laramie); Wyoming.

Meniscoëssus robustus (Marsh).

Marsh, O. C. 1889 D, p. 85, pl. ii, figs. 13-15. (Dipriondon.)

Major, Fors. 1893 A, p. 211. (Dipriondon.)

Osborn, H. F. 1891 A, pp. 128, 130, figs. 4*a*. (Dipriondon.)

1891 B, p. 45.

1891 C, p. 782.

1891 E, p. 601, figs. 5, 7, 8.

1893 B, p. 318.

Roger, O. 1896 A, p. 5. (Syn. of *M. conquistus*.)

Trouessart, E. L. 1898 A, p. 1255. (Syn. of *M. conquistus*.)

Cretaceous (Laramie); Wyoming.

Meniscoëssus sculptus (Marsh).

Marsh, O. C. 1889 D, p. 87, pl. iii, figs. 7-13. (Halodon.)

Dana, J. D. 1896 A, p. 853, figs. 1441 *a-c*. (Halodon.)

Marsh, O. C. 1892 B, p. 261, pl. v, fig. 4. (Halodon.)

Osborn, H. F. 1891 A, p. 126, figs. 1*a, 5, a*. (Halodon.)

1891 B, p. 44.

1891 E, p. 600, fig. 2.

1893 B, p. 318.

Roger, O. 1896 A, p. 5. (Syn. of *M. conquistus*.)

Trouessart, E. L. 1898 A, p. 1255. (Syn. of *M. conquistus*.)

Cretaceous (Laramie); Wyoming.

ORACODON Marsh. Type *O. anceps* Marsh.

Marsh, O. C. 1889 F, p. 178.

Osborn, H. F. 1891 B.

1893 B, p. 317. (Syn. of *Meniscoëssus*.)

Zittel, K. A. 1893 B, p. 83.

Oracodon anceps Marsh.

Marsh, O. C. 1889 F, p. 178, pl. viii, figs. 13-16.

1892 B, p. 256, pl. vii, figs. 6, 7.

Marsh, O. C. 1897 C, p. 521, fig. 91.

Osborn, H. F. 1891 A, p. 131.

1891 B, p. 45.

1891 E, p. 605.

1893 B, p. 319.

Roger, O. 1896 A, p. 5.

Trouessart, E. L. 1898 A, p. 1256.

Cretaceous (Laramie); Wyoming.

Oracodon conulus Marsh.

Marsh, *O. C.* 1892 B, p. 256, pl. vii, fig. 8.
 Dana, J. D. 1896 A, p. 853, fig. 1439 *a, b*.
 Osborn, H. F. 1893 B, p. 319.
 Roger, O. 1896 A, p. 5.

Trouessart, E. L. 1898 A, p. 1256.
 Walcott, C. D. 1900 A, p. 29.
 Zittel, K. A. 1893 B, p. 84, fig. 63.
 Cretaceous (Laramie); Wyoming.

CAMPTOMUS Marsh. Type *C. amplus* Marsh.

Marsh, *O. C.* 1889 D, p. 87.
 Nicholson and Lydekker 1889 A, p. 1268.

Camptomus amplus Marsh.

Marsh, *O. C.* 1889 D, p. 87, pl. v. figs. 1-4, 18-23.
 Osborn, H. F. 1891 A, p. 131.

Osborn, H. F. 1891 B, p. 45.
 Osborn, H. F. 1891 E, p. 605.
 Trouessart, E. L. 1898 A, p. 1256.
 Woodward, A. S. 1898 B, p. 253.
 Zittel, K. A. 1893 B, p. 73, fig. 44.
 Cretaceous (Laramie); Wyoming.

POLYMASTODONTINÆ.

Osborn and Earle 1895 A, p. 11.

Unless otherwise indicated, the following authorities employ for this group, regarded as of family value, the term *Polymastodontidæ*.

Cope, E. D. 1884 Y, p. 687.
 1888 J.
 1888 CC, p. 307.

Haeckel, E. 1895 A, p. 470. (*Polymastodontida*.)
 Lydekker, R. 1887 A, p. 199.

Nicholson and Lydekker 1889 A, p. 1269.
 Osborn, H. F. 1887 F, p. 286.
 1888 C.
 1888 G, pp. 213, 221.
 Roger, O. 1896 A, p. 6.
 Schlosser, M. 1890 C, p. 277.
 Trouessart, E. L. 1898 A, p. 1253.
 Woodward, A. S. 1898 B, p. 252.
 Zittel, K. A. 1893 B, p. 85.

CATOPSALIS Cope. Type *C. foliatus* Cope.

Cope, E. D. 1882 U, p. 416.
 1882 W, p. 520.
 1884 O, pp. xxxv, 168, 170, 733.

Catopsalis foliatus Cope.

Cope, E. D. 1882 U, p. 416.
 1884 O, p. 171, pl. xxiii*d*, fig. 2.
 1884 Y, p. 688, fig. 5. (*Polymastodon*.)

Cope, E. D. 1888 CC, p. 302. (*Polymastodon*.)
 Matthew, W. D. 1897 C, p. 263.
 1899 A, p. 28.
 Osborn and Earle 1895 A, p. 11. (*Polymastodon*.)
 Roger, O. 1896 A, p. 7. (*Polymastodon*.)
 Trouessart, E. L. 1898 A, p. 1254. (*Polymastodon*.)
 Eocene (Puerco); New Mexico.

TÆNIOLABIS Cope. Type *T. sulcatus* Cope.

Cope, E. D. 1882 Z, p. 604.
 1884 O, p. 193. (*Tæniolabis*.)
 1885 M, p. 493. (Syn? of *Polymastodon*.)
 Zittel, K. A. 1893 B, p. 85. (Syn. of *Polymastodon*.)
 By most authors this genus is included with *Polymastodon*, and to this the student is referred.

Tæniolabis sulcatus Cope.

Cope, E. D. 1882 Z, p. 604.
 1884 O, p. 193, pl. xxiii*c*, fig. 7. (*T. scalper*.)
 1885 M, p. 493. (*T. scalper*, syn.? of *Polymastodon taënsis*).

Roger, O. 1896 A, p. 6. (Syn. of *Polymastodon taënsis*.)
 Eocene (Puerco); New Mexico.
 After 1884 Prof. Cope regarded this species as based on what was probably an incisor tooth of *Polymastodon taënsis* Cope. Should Cope's identification eventually prove correct, the name *Tæniolabis* will supersede *Polymastodon*.
 The name *scalper* appears to be merely a substitute for the earlier *T. sulcatus*.

POLYMASTODON Cope. Type *P. taënsis* Cope.

Cope, E. D. 1882 AA, p. 684.
 1884 O, pp. xxxv, 168, 732.
 1884 Y, p. 688.
 1888 I, p. 11.
 1889 L.
 Lydekker, R. 1887 A, p. 200.
 Nicholson and Lydekker 1889 A, p. 1269.
 Osborn, H. F. 1887 A.
 1888 C.
 1891 E, p. 610.
 1893 B.
 1893 E.

Osborn and Earle 1895 A, p. 11.
 Steinmann and Döderlein 1890 A, p. 700.
 Tomes, C. S. 1898 A, p. 330.
 Trouessart, E. L. 1898 A, p. 1253.
 Winge, H. 1893 B, p. 78.
 Woodward, A. S. 1898 B, p. 252.
 Zittel, K. A. 1893 B, p. 85.

Polymastodon attenuatus Cope.

Cope, E. D. 1885 M, p. 494.
 1888 CC, p. 302.
 Matthew, W. D. 1897 C, p. 263.

- Osborn and Earle 1895 A, p. 12, fig. 1A.
 Roger, O. 1896 A, p. 7.
 Trouessart, E. L. 1898 A, p. 1253.
 Woodward, A. S. 1898 B, p. 253, fig. 149.
 Eocene (Puerco); New Mexico.

Polymastodon fissidens Cope.

- Cope, E. D.* 1884 K, p. 322. (Catopsalis.)
 1884 Y, p. 688.
 1888 CC, p. 302.
 Matthew, W. D. 1897 C, p. 263.
 Osborn and Earle 1895 A, pp. 12, 14.
 Roger, O. 1896 A, p. 7.
 Trouessart, E. L. 1898 A, p. 1253.
 Eocene (Torrejon); New Mexico.

Polymastodon latimolis Cope.

- Cope, E. D.* 1885 J, p. 385.
 1888 CC, p. 302.
 Matthew, W. D. 1899 A, p. 28.
 Osborn and Earle 1895 A, pp. 11, 12.
 Roger, O. 1896 A, p. 7.
 Trouessart, E. L. 1898 A, p. 1253.
 Eocene (Puerco); New Mexico.

Polymastodon selenodus Osborn and Earle.

- Osborn and Earle* 1895 A, pp. 12, 15.

- Matthew, W. D. 1897 C, p. 263.
 1899 A, p. 28.
 Roger, O. 1896 A, p. 7.
 Trouessart, E. L. 1898 A, p. 1254.
 Eocene (Puerco); New Mexico.

Polymastodon taðensis Cope.

- Cope, E. D.* 1882 AA, p. 684.
 1882 AA, p. 685. (Catopsalis pollux.)
 1883 E. (Catopsalis pollux.)
 1884 O, p. 732, pl. xxxiii c, fig. 6 (Polymastodon taðensis); p. 734, pl. xxiii c, figs. 1-5 (Catopsalis pollux.)
 1884 Y, p. 689, figs. 3, 4.
 1885 M, p. 493.
 1888 I, p. 11, fig. 8.
 1888 CC, p. 302.
 1889 C, p. 270, fig. 92.
 Lydekker, R. 1887 A, p. 200, fig. 32.
 Matthew, W. D. 1897 C, p. 263.
 1899 A, p. 28.
 Osborn and Earle 1895 A, pp. 11, 12, fig. 1, C.
 Roger, O. 1896 A, p. 6.
 Trouessart, E. L. 1898 A, p. 1253.
 Woodward, A. S. 1898 B, p. 253, fig. 149.
 Zittel, K. A. 1893 B, p. 86, fig. 66.
 Eocene (Puerco); New Mexico.

Subclass EUTHERIA Gill.

- Gill, T.* 1872 B, p. vi.
Cope, E. D. 1887 Q.
 1889 R, p. 874.
 1891 N, pp. 65, 66.
 1898 B, p. 104.
Flower, W. H. 1883 A.
 1883 D, p. 383.
Flower and Lydekker 1891 A, p. 173.
Gill, T. 1888 A.
Haeckel, E. 1895 A, p. 467. (Prodidelphia.)

- Osborn, H. F. 1893 A, p. 391.
 1894 A. (Cenoplacentalia, Mesoplacentalia.)
 1898 L.
 1899 B, p. 92.
 Osborn and Earle 1895 A, p. 3. (Cenoplacentalia, Mesoplacentalia.)
 Schlosser, M. 1893 A, p. 301.
 Tomes, C. S. 1898 A, p. 305.
 Woodward, A. S. 1898 B, p. 254. (Metatheria.)
 Zittel, K. A. 1893 B, p. 117. (>Placentalia.)

Superorder DIDELPHIA Blainville.

- Cope, E. D.* 1889 R, p. 874.
 1898 B, p. 104.
Flower W. H. 1883 A. (Metatheria, Didelphia.)
 1883 D, p. 378. (Metatheria.)
 1885 A.
Flower and Lydekker 1891 A, p. 128. (Metatheria, Didelphia.)
Gadow, H. 1898 A, p. 40. (Metatheria.)
Gill, T. 1872 A, p. 305.
 1872 B, p. 25, 46.

- Hay, O. P. 1899 F, p. 682.
 Huxley, T. H. 1872 A, p. 276.
 1880 B. (Metatheria.)
 Nicholson and Lydekker 1889 A, p. 1270.
 Osborn, H. F. 1893 A, p. 391. (Metatheria.)
 1898 L. (Metatheria.)
 Parker, W. K. 1885 A, p. 59. (Metatheria.)
 Wilson and Hill 1897 A, p. 429. (Metatheria.)
 Woodward, A. S. 1898 B, p. 254. (Metatheria.)

Order MARSUPIALIA.

- Baird, S. F. 1857 A, p. 230. (Marsupialia.)
 Baur, G. 1885 K, p. 475.
 Bensley, B. A. 1900 A, p. 558.
Cope, E. D. 1873 E, p. 644.
 1880 B, p. 453.
 1884 E.
 1884 O, pp. 167, 788.

- Cope, E. D.* 1884 Y.
 1888 D, p. 255.
 1889 C.
 1889 R, pp. 874, 876 (Pantotheria, in part; Marsupialia.)
 1891 N, p. 69 (Marsupialia); p. 72 (Pantotheria.).

- Flower, W. H. 1869 A, p. 267.
1876 B, xiii, p. 327.
1885 A.
- Flower and Lydekker 1891 A, p. 128.
- Gaudry, A. 1878 B, p. 9.
- Gegenbaur, C. 1898 A.
- Gill, T. 1872 A, p. 305.
1872 B, pp. 25, 46. (Didelphia.)
- Gill and Coues 1877 A, p. 1072.
- Gruber, W. 1859 A.
- Haeckel, E. 1899 A, p. 479.
- Huxley, T. H. 1870 A.
1872 A, p. 273 (Metatheria); p. 276 (Didelphia).
- Kollman, J. 1888 A.
- Kükenthal, W. 1891 A, p. 368.
1892 A.
- Leche, W. 1893 A, p. 521.
1893 B.
1895 A, p. 83.
1896 A, p. 292.
1896 B.
- Lydekker, R. 1887 A, p. ix (Pantotheria, in part); p. 146 (Marsupialia).
1896 B.
1900 A, p. 922.
- Marsh, O. C. 1877 E.
1880 F, p. 239. (Pantotheria, in part.)
1885 C. (Pantotheria, in part.)
1887 A, p. 345. (Pantotheria, in part; Marsupialia.)
- Nicholson and Lydekker 1889 A, p. 1272.
- Osborn, H. F. 1888 G, p. 258.
1891 A, p. 125. (Pantotheria, in part.)
1891 C, p. 780. (Pantotheria, in part.)
1891 E, p. 599. (Pantotheria, in part.)
1893 A, p. 379.
1893 D.
1898 L.
1900 C, p. 566.
- Owen, R. 1838 A, p. 120.
1839 A.
1839 D.
- Owen, R. 1843 A, p. 72.
1845 B, p. 273.
1851 C, p. 733.
1866 B, p. 328.
1868 A, p. 285.
1871 A.
- Parker, W. K. 1868 A, p. 195.
- Paulli, S. 1899 A, p. 147.
- Pollard, E. C. 1893 A.
- Reh, L. 1895 A, p. 163.
- Roger, O. 1889 A.
- Röse, C. 1892 A, p. 638.
1892 D, p. 508.
1892 E.
- Ryder, J. 1878 A, p. 49.
- Schlosser, M. 1886 C.
1889 A.
1890 A.
1890 C.
1890 D.
1892 A.
1893 A.
- Schmidt, O. 1886 A, p. 93.
- Schwalbe, J. 1894 A.
- Slade, D. D. 1888 A, p. 242.
- Steinmann and Döderlein 1890 A, p. 700.
- Thomas, O. 1888 A.
1892 B.
- Thompson, J. A. 1897 A, p. 43.
- Tims, H. W. M. 1896 A.
- Tomes, C. S. 1898 A, p. 562.
- Tornier, G. 1890 A.
- Trouessart, E. L. 1898 A, p. 1155.
- Turner, W. 1899 A.
- Weyhe, ——— 1875 A, p. 107.
- Wilson and Hill 1897 A, p. 427.
- Winge, H. 1893 C, pp. 61, 86.
- Woodward, A. S. 1898 B, p. 255.
- Woodward, M. F. 1893 A.
1896 B.
- Wortman, J. L. 1886 A, p. 493.
- Zittel, K. A. 1893 B, p. 86 (Marsupialia); pp. 95, 723, 724 (Pantotheria, in part).

Suborder POLYPROTODONTIA.

- Flower and Lydekker 1891 A, p. 133.
- Gadow, H. 1898 A, p. 40.
- Lydekker, R. 1887 A, p. 254.
- Nicholson and Lydekker 1889 A, p. 1272.
- Owen, R. 1868 A, p. 293. ("Polyprotodont.")
1871 A, p. 88. ("Polyprotodont section.")
- Roger, O. 1896 A, p. 12.
- Woodward, A. S. 1898 B, p. 255.

STAGODONTIDÆ.

- Marsh, O. C. 1889 F, p. 178.
- Cope, E. D. 1892 U, p. 760. (Thlæodontidæ.)
- Marsh, O. C. 1892 B, pp. 256, 257.
- Osborn, H. F. 1891 B, p. 45.
1891 C, p. 780.
1892 D.

STAGODON Marsh. Type *S. nitor* Marsh.

- Marsh, O. C. 1889 F, p. 178.
- Ameghino, F. 1894 A, p. 335.
- Cope, E. D. 1892 U, p. 760.
- Marsh, O. C. 1891 I, p. 240.
1892 B, p. 257.
- Osborn, H. F. 1891 B, p. 45.
1891 C, p. 780.
1893 B, p. 324.
- Trouessart, E. L. 1898 A, p. 670.
- Zittel, K. A. 1893 B, p. 510.
- Stagodon nitor** Marsh.
- Marsh, O. C. 1889 F, p. 178, pl. vii. figs. 22-25.
1892 B, p. 262, pl. viii. figs. 1, 2.
- Osborn, H. F. 1891 A, p. 131, fig. 8a.
1891 B, p. 45.

Osborn, H. F. 1891 C, p. 780, fig. 1.

1891 E, p. 606, fig. 12.

1893 B, p. 323.

Roger, O. 1896 A, p. 90.

Zittel, K. A. 1893 B, p. 511, fig. 425A.

Cretaceous (Laramie); Wyoming.

Stagodon tumidus Marsh.

Marsh, O. C. 1889 F, p. 178, pl. vii, figs. 17-21.

Dana, J. D. 1896 A, p. 853, fig. 1438 *a, b*.

Marsh, O. C. 1892 B, p. 262, pl. viii, fig. 3.

Roger, O. 1896 A, p. 89.

Cretaceous (Laramie); Wyoming.

Stagodon validus Marsh.

Marsh, O. C. 1892 B, p. 256, pl. viii, figs. 4-7.

Cope, E. D. 1892 U, p. 760.

Dana, J. D. 1896 A, p. 853, fig. 1437 *a-e*.

Marsh, O. C. 1897 C, p. 521, fig. 92.

Osborn, H. F. 1891 B, p. 45.

Roger, O. 1896 A, p. 90.

Zittel, K. A. 1893 B, p. 511, figs. 425B, 426.

Cretaceous (Laramie); Wyoming.

THLÆODON Cope. Type *T. padanacus* Cope.

Cope, E. D. 1892 U, p. 759.

1892 D.

Osborn, H. F. 1893 A, p. 388.

1893 B, pp. 324, 328.

1893 D.

Zittel, K. A. 1893 B, p. 511.

Thlæodon padanicus Cope.

Cope, E. D. 1892 U, p. 759, pl. xxii.

Roger, O. 1896 A, p. 90.

Trouessart, E. L. 1898 A, p. 669.

Cretaceous (Laramie); Wyoming.

PLATACODON Marsh. Type *P. nanus* Marsh.

Marsh, O. C. 1889 F, p. 178.

1892 B, p. 259.

Platacodon nanus Marsh.

Marsh, O. C. 1889 F, p. 178, pl. viii, figs. 4-12.

Hatcher, J. B. 1900 A, p. 719.

Marsh, O. C. 1892 B, p. 262, pl. xi, figs. 6, 7.

Osborn, H. F. 1891 A, p. 132, fig. 8b.

1891 B, p. 45.

1891 E, p. 609, fig. 12b.

1893 B, p. 323.

Cretaceous (Laramie); Wyoming.

By Hatcher this genus has been referred to the fishes.

CIMOLESTIDÆ.

Marsh, O. C. 1892 B, p. 257.

Trouessart, E. L. 1898 A, p. 1202. (Epanorthidæ, in part.)

PEDIOMYS Marsh. Type *P. elegans* Marsh.

Marsh, O. C. 1889 D, p. 89.

Nicholson and Lydekker 1889 A, p. 1277.

Osborn, H. F. 1891 A, p. 131.

1891 B, p. 45.

1891 E, p. 609.

1893 B, p. 324.

Zittel, K. A. 1893 B, p. 102.

Pediomys elegans Marsh.

Marsh, O. C. 1889 D, p. 89, pl. iv, figs. 23-25.

Marsh, O. C. 1892 B, p. 262, pl. x.

Osborn, H. F. 1891 A, p. 131.

1891 B, p. 45.

1891 E, p. 606.

1893 B, p. 323.

Roger, O. 1896 A, p. 15.

Trouessart, E. L. 1898 A, p. 1249.

Cretaceous (Laramie); Wyoming.

BATODON Marsh. Type *B. tenuis* Marsh.

Marsh, O. C. 1892 B, p. 258.

Osborn, H. F. 1893 B, p. 324.

Zittel, K. A. 1893 B, p. 106.

Batodon tenuis Marsh.

Marsh, O. C. 1892 B, p. 258, pl. x, fig. 6; pl. xi, fig. 2.

Dana, J. D. 1896 A, p. 853, fig. 1436 *a-e*.

Osborn, H. F. 1893 B, p. 324.

Roger, O. 1896 A, p. 19.

Trouessart, E. L. 1898 A, p. 1204.

Walcott, C. D. 1900 A, p. 23.

Zittel, K. A. 1893 B, p. 106, fig. 92.

Cretaceous (Laramie); Wyoming.

DIDELPHODON Marsh. Type *D. vorax* Marsh.

Marsh, O. C. 1889 D, p. 88.

1889 F, p. 179. (Didelphops, to replace Didelphodon.)

1889 I, p. 15. (Didelphops.)

Nicholson and Lydekker 1889 A, p. 1277.

Osborn, H. F. 1891 B.

1891 E, p. 610.

1893 B, p. 323.

Roger, O. 1896 A, p. 18. (Didelphops.)

Woodward, M. F. 1896 A, p. 586.

Zittel, K. A. 1893 B, p. 105.

Didelphodon comptus Marsh.

Marsh, O. C. 1889 D, p. 88, pl. iv, figs. 5-7, 20-22.

Dana, J. D. 1896 A, p. 853, fig. 1433 *a-e*. (Didelphops.)

Marsh, O. C. 1892 B, p. 262, pl. x, figs. 1, 2. (Didelphops.)

Osborn, H. F. 1891 A, p. 131. (Didelphops.)

1891 B, p. 45. (Didelphops.)

1891 E, p. 606. (Didelphops.)

Roger, O. 1896 A, p. 18. (Didelphops.)

Cretaceous (Laramie); Wyoming.

Didelphodon ferox Marsh.

Marsh, O. C. 1889 D, p. 88, pl. iv, figs. 4, 26-28.

Dana, J. D. 1896 A, p. 853, fig. 1435 *a, b*. (Didelphops.)

Marsh, O. C. 1892 B, p. 262, pl. ix, figs. 7, 8. (Didelphops.)

Osborn, H. F. 1891 A, p. 131. (Didelphops.)

1891 B, p. 45. (Didelphops.)

1891 E, p. 606. (Didelphops.)

Roger, O. 1896 A, p. 18. (Didelphops.)

Cretaceous (Laramie); Wyoming.

Didelphodon vorax Marsh.

Marsh, O. C. 1889 D, p. 88, pl. iv, figs. 1-3.

Dana, J. D. 1896 A, p. 853, fig. 1434. (Didelphops.)

Marsh, O. C. 1892 B, p. 262, pl. ix, fig. 1. (Didelphops.)

Osborn, H. F. 1891 A, p. 131. (Didelphops.)

1891 B, p. 45. (Didelphops.)

1891 E, p. 606. (Didelphops.)

1893 B, p. 323, fig. 42. (Didelphops.)

Zittel, K. A. 1893 B, p. 105, fig. 87.

Cretaceous (Laramie); Wyoming.

CIMOLESITES Marsh. Type *C. incisus* Marsh.

Marsh, O. C. 1889 D, p. 89.

1889 F, p. 179.

Nicholson and Lydekker 1889 A, p. 1277.

Osborn, H. F. 1891 A, p. 131.

1891 B, p. 45.

1891 E, p. 610.

1893 B, p. 325.

Zittel, K. A. 1893 B, p. 105.

Cimolestes curtus Marsh.

Marsh, O. C. 1889 D, p. 89, pl. iv, figs. 8-11.

Osborn, H. F. 1891 A, p. 131.

1891 B, p. 45.

1891 E, p. 606.

Roger, O. 1896 A, p. 18.

Trouessart, E. L. 1898 A, p. 1204.

Cretaceous (Laramie); Wyoming.

Cimolestes incisus Marsh.

Marsh, O. C. 1889 D, p. 89, pl. iv, figs. 12-19.

Dana, J. D. 1896 A, p. 853, fig. 1432 *a-d*.

Marsh, O. C. 1892 B, p. 262, pl. x, fig. 5.

Osborn, H. F. 1891 A, p. 131.

1891 B, p. 45.

1891 E, p. 606.

1893 B, p. 323, fig. 4.

Roger, O. 1896 A, p. 18.

Trouessart, E. L. 1898 A, p. 1204.

Zittel, K. A. 1893 B, p. 106, fig. 89.

Cretaceous (Laramie); Wyoming.

TELACODON Marsh. Type *T. laevis* Marsh.

Marsh, O. C. 1892 B, p. 258.

Osborn, H. F. 1893 B, p. 324.

Zittel, K. A. 1893 B, p. 106.

Telacodon laevis Marsh.

Marsh, O. C. 1892 B, p. 258, pl. ix, figure; pl. x, figure.

Osborn, H. F. 1893 B, p. 323.

Roger, O. 1896 A, p. 19.

Trouessart, E. L. 1898 A, p. 1204.

Zittel, K. A. 1893 B, p. 106, fig. 90.

Cretaceous (Laramie); Wyoming.

Telacodon præstans Marsh.

Marsh, O. C. 1892 B, p. 258, pl. ix, figs. 2, 3; pl. xi fig. 1.

1897 C, p. 521, fig. 90.

Roger, O. 1896 A, p. 19.

Trouessart, E. L. 1898 A, p. 1204.

Walcott, C. D. 1900 A, p. 23.

Zittel, K. A. 1893 B, p. 106, fig. 91.

Cretaceous (Laramie); Wyoming.

TRICONODONTIDÆ.

Marsh, O. C. 1887 A, p. 341.

Cope, E. D. 1889 C, p. 226.

Haeckel, E. 1895 A, p. 470. (Triconodontida.)

Lydekker, R. 1887 A, p. 257.

Marsh, O. C. 1887 A, p. 340. (Spalacotheriidae, Tinodontidæ.)

Nicholson and Lydekker 1889 A, p. 1277.

Osborn, H. F. 1887 F, p. 287.

1888 C, p. 235.

Osborn, H. F. 1888 G, pp. 227, 241.

1893 D. (Triconodonta.)

1898 A, p. 147. (Triconodonta.)

1898 B, p. 177. (Triconodonta.)

Roger, O. 1896 A, p. 12.

Steinmann and Döderlein 1890 A, p. 697.

Trouessart, E. L. 1898 A, p. 1249.

Winge, H. 1893 C, p. 75.

Zittel, K. A. 1893 B, p. 97. (Triconodonta.)

TRICONODONTINÆ nom. nov.

Goodrich, E. S. 1894 A, p. 420. (Amphilestes.)

Osborn, H. F. 1888 G, p. 228. (Amphilestinæ.)

Winge, H. 1893 C, p. 76. (Amphilestidæ.)

TRICONODON Owen. Type *T. mordax* Owen.

Owen, R., 1859, Encyc. Brit., ed. 8., xvii, p. 161.

Cope, E. D. 1888 D, p. 257.

1889 C, p. 227.

Leche, W. 1896 B, p. 280.

Lydekker, R. 1887 A, p. 258.

Marsh, O. C. 1879 F, p. 215.

1880 A, p. 237.

Nicholson and Lydekker 1889 A, p. 1277.

Osborn, H. F. 1887 F, p. 287.

1888 C, p. 235.

1888 F, p. 1071.

1888 G, p. 228.

1893 D, p. 22.

1898 R, p. 320.

Owen, R. 1871 A, p. 58.

Schlosser, M. 1890 C, p. 242, fig. I, 5.

Scott, W. B. 1892 A, p. 405.

Steinmann and Döderlein 1890 A, p. 697.

Thomas, O. 1892 B.

Trouessart, E. L. 1898 A, p. 1249.

Winge, H. 1893 C, p. 77.

Zittel, K. A. 1893 B, p. 97.

Triconodon bisulcus Marsh.

Marsh, O. C. 1880 F, p. 237.

1887 A, p. 343.

Roger, O. 1896 A, p. 14.

Trouessart, E. L. 1898 A, p. 1250.

Jurassic; Wyoming.

PRIACODON Marsh. Type *Tinodon ferox* Marsh.

Marsh, O. C. 1887 A, p. 341.

Nicholson and Lydekker 1889 A, pp. 1275, 1277.

Osborn, H. F. 1887 F, p. 287. (Syn. of Triconodon.)

1888 G, p. 229.

Trouessart, E. L., 1898 A, p. 1250.

Winge, H. 1893 C, p. 76.

Zittel, K. A. 1893 B, p. 98.

Priacodon ferox Marsh.

Marsh, O. C. 1880 F, p. 236. (Tinodon.)

Cope, E. D. 1889 C, p. 227, pl. viii, fig. 4; text fig. 51. (Triconodon.)

Marsh, O. C. 1887 A, p. 341, pl. x, fig. 9.

Osborn, H. F. 1888 G, p. 229, fig. 10 a.

Roger, O. 1896 A, p. 13. (Priacodon, Tinodon.)

Trouessart, E. L. 1898 A, p. 1250. (Syn. of Triconodon ferox Owen.)

Woodward, A. S. 1898 B, p. 259, fig. 152.

Jurassic; Wyoming.

TINODONTINÆ nom. nov.

Goodrich, E. S. 1894 A, p. 417. (Phascolotherium.)

Marsh, O. C. 1879 F, p. 216. (Tinodontidæ.)

1887 A, p. 340. (Tinodontidæ.)

Osborn, H. F. 1887 F, p. 288. (Phascolotheriidæ.)

1888 G, p. 229. (Phascolotheriinae.)

Owen, R. 1846 B, p. 61. (On Phascolotherium.)

Trouessart, E. L. 1898 A, p. 1249. (Triconodontidæ, in part.)

TINODON Marsh. Type *T. bellus* Marsh.

Marsh, O. C. 1879 F, p. 216.

1885 C.

1887 A, p. 340.

Osborn, H. F. 1887 F, p. 288.

1888 C, p. 235.

1888 F, p. 1075.

1888 G, p. 229.

Winge, H. 1893 C, p. 76.

Zittel, K. A. 1893 B, p. 98.

Tinodon bellus Marsh.

Marsh, O. C. 1879 F, p. 216, figure.

1887 A, p. 340, pl. x, fig. 1.

Osborn, H. F. 1888 G, p. 229, figure.

Roger, O. 1896 A, p. 13.

Trouessart, E. L. 1898 A, p. 1251.

Jurassic; Wyoming?

Tinodon lepidus Marsh.

Marsh, O. C. 1879 G, p. 398.

1887 A, p. 343.

Roger, O. 1896 A, p. 13.

Trouessart, E. L. 1898 A, p. 1251.

Jurassic; Wyoming.

Tinodon robustus Marsh

Marsh, O. C. 1879 G, p. 397.

1887 A, p. 343.

Roger, O. 1896 A, p. 13.

Trouessart, E. L. 1898 A, p. 1251

Jurassic; Wyoming.

SPALACOTHERIINÆ.

Osborn, H. F. 1888 G, p. 229.

Lydekker, R. 1887 A, p. 292. (Spalacotheriidæ.)

Marsh, O. C. 1887 A, p. 340. (Spalacotheriidæ.)

Nicholson and Lydekker 1889 A, p. 1277. (Spalacotheriidæ.)

Owen, R. 1885 C, p. 426. (On Spalacotherium.)

MENACODON Marsh. Type *M. rarus* Marsh.

- Marsh, O. C. 1887 A, p. 340.
 Ameghino, F. 1896 A, p. 467. (Syn. of Tinodon.)
 Osborn, H. F. 1888 F, p. 1075.
 1888 G, p. 230.
 Winge, H. 1893 C, p. 76.
 Zittel, K. A. 1893 B, p. 98. (Syn. of Tinodon.)

Menacodon rarus Marsh.

- Marsh, O. C. 1887 A, p. 340, pl. x, figs. 5, 6.

- Cope, E. D. 1889 C, p. 227, fig. 52.
 Osborn, H. F. 1888 G, p. 230, fig. 21.
 Roger, O. 1896 A, p. 13.
 Trouessart, E. L. 1898 A, p. 1251.
 Walcott, C. D. 1900 A, p. 23.
 Jurassic; Wyoming.

AMPHITHERIIDÆ.

- Owen, R. 1846 B, p. 29.
 Goodrich, E. S. 1894 A, p. 409. (Amphitherium.)
 Lydekker, R. 1887 A, p. 269.
 1896 B, p. 52.
 Marsh, O. C. 1887 A, p. 338. (Diplocynodontidæ.)
 Nicholson and Lydekker 1889 A, 1273.

- Osborn, H. F. 1887 F, p. 289. (Diplocynodontidæ.)
 1888 C, p. 234.
 1888 F, p. 1078. (Diplocynodontidæ.)
 1888 G, p. 230.
 Owen, R. 1868 A, p. 287. (Genus Amphitherium.)
 Roger, O. 1896 A, p. 14.
 Trouessart, E. L. 1898 A, p. 1246.
 Zittel, K. A. 1893 B, p. 100.

DICROCYNODON Marsh. Type *Diplocynodon victor* Marsh.

- Marsh, O. C. in Osborn, H. F. 1888 G, p. 263. (To replace Diplocynodon, preoccupied.)
 1880 F, p. 235. (Diplocynodon.)
 1887 A, p. 338. (Diplocynodon.)
 1889 I, p. 14.
 1897 C, p. 508. (Diplocynodon.)
 Osborn, H. F. 1887 D. (Diplocynodon.)
 1893 D, p. 17.
 1897 C, p. 1000.
 Schlessner, M. 1890 C, p. 242. (Diacynodon.)
 Zittel, K. A. 1893 B, p. 99.

Dicrocynodon victor Marsh.

- Marsh, O. C. 1880 F, p. 235, figure. (Diplocynodon.)
 1887 A, p. 338, pl. x, fig. 3. (Diplocynodon.)
 1897 C, p. 508, fig. 69. (Diplocynodon.)
 Osborn, H. F. 1888 G, p. 232, fig. 22. (Diplocynodon.)
 Roger, O. 1896 A, p. 14.
 Trouessart, E. L. 1898 A, p. 1251.
 Woodward, A. S. 1898 B, p. 259, fig. 152.
 Zittel, K. A. 1893 B, p. 99, fig. 78.
 Jurassic; Wyoming.

DOCODON Marsh. Type *D. striatus* Marsh.

- Marsh, O. C. 1881 F, p. 512.
 1887 A, p. 339.
 Osborn, H. F. 1888 G, p. 233.
 Zittel, K. A. 1893 B, p. 99.

Docodon striatus Marsh.

- Marsh, O. C. 1881 F, p. 512.
 1887 A, p. 339, pl. x, fig. 2.

- Osborn, H. F. 1888 G, p. 232, fig. 23.
 Roger, O. 1896 A, p. 14.
 Trouessart, E. L. 1898 A, p. 1252.
 Woodward, A. S. 1898 B, p. 259, fig. 152.
 Jurassic; Wyoming.

ENNACODON Marsh. Type *Enneodon crassus* Marsh.

- Marsh, O. C. 1899 I, p. 15. (To replace *Enneodon* Marsh, preoccupied.)
 1887 A, p. 339. (Enneodon.)
 Nicholson and Lydekker 1889 A, p. 1277. (Enneodon.)
 Osborn, H. F. 1888 G, p. 232. (Enneodon.)
 Zittel, K. A. 1893 B, p. 99. (Enneodon.)

Enneodon affinis Marsh.

- Marsh, O. C. 1887 A, p. 339. (Enneodon.)
 Roger, O. 1896 A, p. 14.
 Trouessart, E. L. 1898 A, p. 1252.

- Walcott, C. D. 1900 A, p. 23. (Enneodon.)
 Jurassic; Wyoming.

Enneacodon crassus Marsh.

- Marsh, O. C. 1887 A, p. 339, pl. x, fig. 4. (Enneodon.)
 Osborn, H. F. 1888 G, p. 232, fig. 24. (Enneodon.)
 Roger, O. 1896 A, p. 14.
 Trouessart, E. L. 1898 A, p. 1252.
 Walcott, C. D. 1900 A, p. 23. (Enneodon.)
 Jurassic; Wyoming.

PAURODONTIDÆ.

- Marsh, O. C. 1887 A, p. 341.
 Osborn, H. F. 1887 F, p. 289. (Peralestidæ, Paurodontidæ.)
 1888 G, p. 233. (Peralestidæ.)

- Trouessart, E. L. 1898 A, p. 1246. (Amphitheriidæ, in part.)
 Woodward, M. F. 1896 A, p. 587. (On Peralestes.)

PAURODON Marsh. Type *P. valens* Marsh.

- Marsh, O. C.* 1887 A, p. 342.
Ameghino, F. 1899 A, p. 571.
Cope, E. D. 1888 D, p. 257.
 1889 C, p. 236.
Osborn, H. F. 1887 F, p. 289.
 1888 G, p. 233.
Winge, H. 1893 C, p. 76.

Paurodon valens Marsh.

- Marsh, O. C.* 1887 A, p. 342, pl. ix, figs. 7, 8.
Osborn, H. F. 1888 G, p. 233, figs. 25 a, b.
Roger, O. 1896 A, p. 15.
Trouessart, E. L. 1898 A, p. 1247.
Walcott, C. D. 1900 A, p. 23.
 Jurassic; Wyoming.

DRYOLESTIDÆ.

- Marsh, O. C.* 1879 G, p. 397.
Ameghino, F. 1896 A, p. 409. (Stylacodontidæ.)
Lydekker, R. 1887 A, p. 289. (Stylodontidæ.)
Marsh, O. C. 1879 E, p. 60. (Stylodontidæ.)
 1887 A, p. 334.
Nicholson and Lydekker 1889 A, p. 1410. (Stylodontidæ.)

- Osborn, H. F.* 1887 F, p. 290. (Stylodontidæ.)
 1888 A, p. 298. (Stylacodontidæ.)
 1888 C, p. 232. (Stylodontidæ.)
 1888 G, p. 236. (Stylacodontidæ.)
Steinmann and Döderlein 1890 A, p. 698. (Stylacodontidæ.)
Trouessart, E. L. 1898 A, p. 1246. (Amphitheriidae, in part.)

STYLACODON Marsh. Type *S. gracilis* Marsh.

- Marsh, O. C.* 1879 E, p. 60.
Ameghino, F. 1896 A, p. 454.
Lydekker, R. 1887 A, p. 289 (Stylacodon); p. 290 (Stylodon).
Marsh, O. C. 1885 C.
 1887 A, p. 335.
Nicholson and Lydekker 1889 A, p. 1276. (Amblotherium.)
Osborn, H. F. 1887 D. (Stylodon.)
 1887 F, p. 290. (Syn.? of Stylodon.)
 1888 A, p. 300.
 1888 G, p. 207 (Stylodon); pp. 236, 243 (Stylacodon).
Owen, R. 1866 D. (Stylodon, not of Beck, 1837.)
Zittel, K. A. 1893 B, p. 102. (Syn.? of Dryolestes.)

Stylacodon gracilis Marsh.

- Marsh, O. C.* 1879 E, p. 60.
 1887 A, pl. ix, fig. 1.
 1897 C, p. 508, fig. 68.
Osborn, H. F. 1888 G, p. 237, fig. 26.
Roger, O. 1896 A, p. 15.
Trouessart, E. L. 1898 A, p. 1248.
 Jurassic; Wyoming.

Stylacodon validus Marsh.

- Marsh, O. C.* 1880 F, p. 236.
Roger, O. 1896 A, p. 15.
Trouessart, E. L. 1898 A, p. 1249.
 Jurassic; Wyoming.

DRYOLESTES Marsh. Type *D. priscus* Marsh.

- Marsh, O. C.* 1878 D.
 1879 F, p. 215.
 1885 C.
 1887 A, pp. 333, 334.
Nicholson and Lydekker 1889 A, pp. 1276, 1277.
Osborn, H. F. 1888 C, p. 235.
 1888 G, p. 237. (Syn.? of Phascolestes.)
Schlosser, M. 1890 C, p. 242.
Steinmann and Döderlein 1890 A, p. 698.
Winge, H. 1893 C, p. 76.
Woodward, M. F. 1896 A, p. 587.
Zittel, K. A. 1893 B, p. 102.

Dryolestes arcuatus Marsh.

- Marsh, O. C.* 1879 G, p. 397.
 1887 A, p. 343.
Roger, O. 1896 A, p. 15.
Trouessart, E. L. 1898 A, p. 1248.
 Jurassic; Wyoming.

Dryolestes gracilis Marsh.

- Marsh, O. C.* 1881 F, p. 513.
 1887 A, p. 343.
 1897 C, p. 526.
Roger, O. 1896 A, p. 15.
Trouessart, E. L. 1898 A, p. 1248.
 Jurassic; Wyoming, Colorado.

Dryolestes obtusus Marsh.

- Marsh, O. C.* 1880 F, p. 237.
 1887 A, p. 343.
Roger, O. 1896 A, p. 15.
Trouessart, E. L. 1898 A, p. 1248.
 Jurassic; Wyoming.

Dryolestes priscus Marsh.

- Marsh, O. C.* 1878 D.
 1879 F, p. 215.
 1887 A, p. 334, pl. ix, fig. 2.
Osborn, H. F. 1888 G, p. 238, fig. 28.
Roger, O. 1896 A, p. 15.
Trouessart, E. L. 1898 A, p. 1248.
Woodward, A. S. 1898 B, p. 259, fig. 152.
Zittel, K. A. 1893 B, p. 102, fig. 81.
 Jurassic; Wyoming.

Dryolestes tenax Marsh.

- Marsh, O. C.* 1889 D, p. 87.
Osborn, H. F. 1891 A, p. 131.
 1891 B, p. 45.
 1891 E, p. 606.
Roger, O. 1896 A, p. 15.
Trouessart, E. L. 1898 A, p. 1248.
 Cretaceous (Laramie); Wyoming.

Dryolestes vorax Marsh.

Marsh, O. C. 1879 F, p. 215,
1887 A, p. 334, pl. ix, figs. 3, 4.
Osborn, H. F. 1888 G, p. 237, fig. 27.

Roger, O. 1896 A, p. 15.
Trouessart, E. L. 1898 A, p. 1248.
Woodward, A. S. 1898 B, p. 259, fig. 152.
Jurassic; Wyoming.

ASTHENODON Marsh. Type *A. segnis* Marsh.

Marsh, O. C. 1887 A, p. 336, pl. ix, figs. 6, 7.
Nicholson and Lydekker 1889 A, p. 1276.
Osborn, H. F. 1888 A, p. 300.
1888 F, p. 1071.
1888 G, p. 238.
Winge, H. 1893 C, p. 76.
Zittel, K. A. 1893 B, p. 102.

Asthenodon segnis Marsh.

Marsh, O. C. 1887 A, p. 336, pl. ix, figs. 6, 7
Osborn, H. F. 1888 G, p. 238, figs. 29, A, B.
Roger, O. 1896 A, p. 15.
Trouessart, E. L. 1898 A, p. 1248.
Woodward, A. S. 1898 B, p. 259, fig. 152.
Jurassic; Wyoming.

LAODON Marsh. Type *L. venustus* Marsh.

Marsh, O. C. 1887 A, p. 337.
Ameghino, F. 1899 A, p. 571.
Nicholson and Lydekker 1889 A, p. 1276.
Osborn, H. F. 1888 G, p. 238.
Winge, H. 1893 C, p. 76.

Laodon venustus Marsh.

Marsh, O. C. 1887 A, p. 337, pl. ix, fig. 5.

Osborn, H. F. 1888 G, p. 238, fig. 30.
Roger, O. 1896 A, p. 15.
Trouessart, E. L. 1898 A, p. 1248.
Walcott, C. D. 1900 A, p. 23.
Woodward, A. S. 1898 B, p. 259, fig. 152.
Jurassic; Wyoming.

DIDELPHIDÆ.

Ameghino, F. 1889 A, p. 277.
Baird, S. F. 1857 A, p. 231. (Didelphydæ, Peratheridæ.)
Baur, G. 1885 K, p. 475.
Cope, E. D. 1889 B, p. 876.
Flower, W. H. 1883 D, p. 380.
Flower and Lydekker 1891 A, p. 133.
Gegenbaur, C. 1898 A.
Haeckel, E. 1895 A, p. 481. (Didelphyida.)
Lydekker, R. 1887 A, p. 278.
1896 B, p. 55.
Nicholson and Lydekker 1889 A, p. 1280.

Osborn, H. F. 1893 G, p. 497.
1900 C, p. 566.
Owen, R. 1838 A.
1839 A.
Parker, W. K. 1885 A, p. 59.
Roger, O. 1896 A, p. 18.
Schlosser, M. 1889 A.
Schmidt, O. 1886 A, p. 97.
Tomes, C. S. 1898 A, p. 562.
Winge, H. 1893 C, p. 89.
Wyman, J. 1872 A.
Zittel, K. A. 1893 B, p. 105.

DIDELPHIS¹ Linnæus. Type *D. marsupialis* Linn.

Linnæus, C., 1758, Syst. Nat., ed. 10, i, p. 54.
Ameghino, F. 1889 A, p. 277.
Aymard, A., 1848, Mem. Soc. Acad. du Puy.
(Peratherium.)
Baird, S. F. 1857 A, p. 232.
Bensley, B. A. 1900 A, p. 559.
Burmeister, H. 1879 B, p. 183.
Cope, E. D. 1873 T, p. 1. (Herpetotherium, type
H. jagax.)
1873 CC, p. 4. (Embassia, type *E. alternans*,
Peratherium.)
1874 B, pp. 465, 468 (Embassia, Herpetotherium); p. 472 (Didelphys).
1874 P, p. 23. (Herpetotherium.)
1879 A, p. 45. (Didelphys.)
1884 O, p. 37 (Didelphys); pp. 260, 268, 788,
789 (Peratherium).
1884 Y, p. 687. (Peratherium.)
Coues, E. 1872 A.
Emery, C. 1897 C.
Flower, W. H. 1885 A.

Flower and Lydekker 1891 A, p. 134.
Gaudry, A. 1878 B, p. 11.
Kükenthal, W. 1891 B, p. 658, figs. 1-8.
Lydekker, R. 1887 A, p. 278.
Marsh, O. C. 1877 E.
Nicholson and Lydekker 1887 A, p. 1458.
Osborn, H. F. 1892 I.
Owen, R. 1838 A.
1843 A, pp. 57, 72.
1866 A, p. 330, *et seq.*
1868 A, p. 288.
Pictet, F. J. 1853 A, p. 394.
Röse, C. 1892 E, p. 641.
Schlosser, M. 1887 B, p. 145. (Peratherium.)
1890 C, p. 244.
1890 D.
Thomas, O. 1892 B.
Trouessart, E. L. 1898 A, p. 1230.
Weil, R. 1899 A, p. 103, pls. ii, iii.
Zittel, K. A. 1893 B, p. 106.

¹ This is the original orthography. The form *Didelphys* is usually employed by writers.

Didelphis alternans (Cope).

- Cope, E. D.* 1873 CC, p. 7. (Embassiss.)
 1874 B, p. 468. (Embassiss.)
 1884 O, pp. 794, 798, pl. lxii, figs. 22-24.
 (Peratherium.)
Matthew, W. D. 1899 A, p. 52.
Roger, O. 1896 A, p. 20.
Trouessart, E. L. 1898 A, p. 1232.
 Oligocene (White River); Colorado.

Didelphis comstocki (Cope).

- Cope, E. D.* 1884 O, p. 269 (Peratherium comstocki);
 pl. xxv a, fig. 15. P. comstockianum.)
Matthew, W. D. 1899 A, p. 31.
Roger, O. 1896 A, p. 19.
Trouessart, E. L. 1898 A, p. 1230.
 Eocene (Wasatch); Wyoming.

Didelphis fugax (Cope).

- Cope, E. D.* 1873 T, p. 1. (Herpetotherium fuzax,
err. typ.)
 1873 CC, pp. 5, 6. (Herpetotherium.)
 1874 B, p. 467. (Herpetotherium.)
 1874 P, p. 23. (Herpetotherium.)
 1884 O, p. 794, pl. lxii, figs. 1-9. (Perathe-
 rium.)
 1884 Y, p. 687, fig. 1. (Peratherium.)
Matthew, W. D. 1899 A, p. 52.
Roger, O. 1896 A, p. 21.
Trouessart, E. L. 1898 A, p. 1232.
 Oligocene (White River); Colorado.

Didelphis huntii (Cope).

- Cope, E. D.* 1873 CC, p. 5. (Herpetotherium.)
 1873 CC, pp. 5, 6 (Herpetotherium steven-
 soni); p. 8 (Miothen gracile).
 1874 B, p. 466 (Herpetotherium huntii);
 p. 467 (H. stevensoni); p. 470 (Domnina
 gracilis).
 1884 O, pp. 794, 796, pl. lxii, figs. 12-16.
 (Peratherium.)
 1887 Y, p. 687. (Peratherium.)
Matthew, W. D. 1899 A, p. 52.
Roger, O. 1896 A, p. 21.
Trouessart, E. L. 1898 A, p. 1232.
 Oligocene (White River); Colorado.

Didelphis marginalis (Cope).

- Cope, E. D.* 1873 CC, pp. 5, 6. (Herpetotherium.)

- Cope, E. D.* 1874 B, p. 468. (Embassiss.)
 1884 O, pp. 794, 798, pl. lxii, figs. 19-21.
 (Peratherium.)
Matthew, W. D. 1899 A, p. 52.
Roger, O. 1896 A, p. 21.
Trouessart, E. L. 1898 A, p. 1232.
 Oligocene (White River); Colorado.

Didelphis pygmaea Scott.

- Scott, W. B.* 1884 A, p. 442, figure.
Matthew, W. D. 1899 A, p. 52.
Roger, O. 1896 A, p. 21.
Trouessart, E. L. 1898 A, p. 1232.
 Oligocene (White River); Colorado.

Didelphis scalaris (Cope).

- Cope, E. D.* 1873 CC, pp. 5, 7. (Herpetotherium.)
 1874 B, p. 467. (Herpetotherium.)
 1884 O, pp. 794, 797, pl. lxii, figs. 17, 18.
 (Peratherium.)
Matthew, W. D. 1899 A, p. 52.
Roger, O. 1896 A, p. 21.
Trouessart, E. L. 1898 A, p. 1232.
 Oligocene (White River); Colorado.

Didelphis tricuspidis (Cope).

- Cope, E. D.* 1873 CC, p. 5. (Herpetotherium.)
 1874 B, p. 466. (Herpetotherium.)
 1884 O, pp. 794, 796, pl. lxii, figs. 10, 11.
 (Peratherium.)
Roger, O. 1896 A, p. 21.
Trouessart, E. L. 1898 A, p. 1232.
 Oligocene; Colorado.

Didelphis virginiana Kerr.

- Kerr, Robert*, 1792, Animal Kingdom, i, No. 386.
 (Fide J. A. Allen.)
Baird, S. F. 1857 A, p. 232.
Coues, E. 1872 A.
Emmons, E. 1858 A, p. 78. ("Insectivorous mam-
 mal.")
Leidy, J. 1860 B, p. 116, pl. xxiii, fig. 2.
 1869 A, p. 410.
Trouessart, E. L. 1898 A, p. 1233. (Subsp. of D.
 marsupialis.)
Wyman, J. 1872 A.
 Recent; eastern North America: Pleistocene;
 South Carolina.

Superorder MONODELPHIA.

- Cope, E. D.* 1889 R, p. 874.
 1898 B, p. 104.
Flower, W. H. 1883 A.
 1883 D, p. 383. (Eutheria, or Monodelphia.)
 1885 A, p. 6. (Eutheria, Monodelphia.)
Gadow H. 1898 A, p. 41. (Eutheria.)
Gill, T. 1872 A, p. 295.
 1872 B, p. 46.

- Haeckel, E.* 1895 A, p. 487. (Placentalia.)
Huxley, T. H. 1872 A, p. 281.
 1880 B. (Monodelphia, Eutheria.)
Nicholson and Lydekker 1889 A, p. 1289. (Eu-
 theria.)
Osborn, H. F. 1893 A, p. 391. (Eutheria.)
 1898 L, p. 456. (Eutheria.)
Woodward, A. S. 1898 B, p. 266. (Eutheria.)

Order BRUTA Linn.

- Linnaeus, C.*, 1758, Syst. Nat., ed. 10, i, p. 83.
 Unless otherwise indicated, the following au-
 thorities employ the name *Edentata* for this
 order.

- Ameghino, F.* 1889 A, p. 653.
Baur, G. 1885 K, p. 477.
Blainville, H. M. D. 1839 A. ("Edentés.")
 1839 B. ("Edentés.")

- Blainville, H. M. D. 1839 C, p. 113.
 1864 A, iv, DD. pls. i-vi.
 Broom, R. 1897 A.
 Burmeister, H. 1866 B, p. 148.
 1871 A.
 1871 B.
 1879 B, p. 275.
 Cope, E. D. 1880 B, p. 454.
 1884 X.
 1887 S, p. 342.
 1888 I, p. 4.
 1888 K, p. 163.
 1889 C.
 1889 P.
 1889 R, p. 875.
 1897 A, p. 323.
 1898 B, p. 105.
 Cuvier, G. 1834 A, viii, pt. i, pp. 129-270.
 Filhol, H. 1894 A.
 Flower, W. H. 1869 A, p. 265.
 1882 A.
 1883 A.
 1883 D, p. 383.
 1885 A.
 Flower and Lydekker 1891 A, p. 176.
 Gadow, H. 1898 A, p. 41.
 Gaudry, A. 1878 B, p. 192.
 Gegenbaur, C. 1898 A.
 Gervais, P. 1873 A.
 Gill, T. 1872 A, p. 304. (Bruta.)
 1872 B, pp. 23, 50. (Bruta.)
 Gill and Coues 1877 A, p. 1069.
 Gray, J. E. 1869 A, p. 361. (Bruta.)
 Haeckel, E. 1895 A, pp. 490, 511.
 Hay, O. P. 1899 F, p. 682. (Bruta.)
 Huxley, T. H. 1872 A, p. 282. (Edentata, or Bruta.)
 Leche, W. 1893 A, p. 527.
 1895 A, p. 108.
 1897 A.
 Leidy, J. 1871 C, p. 365.
 Marsh, O. C. 1877 E.
 1897 B, p. 144.
 Lydekker, R. 1896 B.
 Nicholson and Lydekker 1889 A, 1289.
 Osborn, H. F. 1888 F, p. 1067.
 1893 D.
 1893 G, p. 493.
 1897 F, p. 611.
 Owen, R. 1840 F, p. 85. (Bruta, or Edentata.)
 1842 D.
 1845 B, p. 317.
 1851 C, p. 740.
 1860 D.
 1866 B, p. 393.
 1868 A, p. 272. (Bruta.)
 Parker, W. K. 1868 A, p. 199.
 1885 A, p. 90.
 1886 A.
 Parsons, F. G. 1899 A.
 1900 A.
 Rapp, W. 1852 A.
 Reh, L. 1895 A.
 Roemer, F. 1892 A.
 1893 A.
 Röse, C. 1892 D, p. 495.
 Roger, O. 1896 A, p. 90.
 Schlosser, M. 1890 A.
 1890 C.
 1890 D.
 1892 A.
 1893 A.
 Schmidt, O. 1886 A, p. 110.
 Slade, D. D. 1888 A, p. 242.
 1890 A.
 Steinmann and Döderlein 1890 A, p. 736.
 Thomas, O. 1888 A.
 Tomes, C. S. 1898 A, p. 370.
 Trouessart, E. L. 1898 A, p. 1094.
 Turner, H. N. 1848 A.
 Weber, Max 1893 A.
 1893 B.
 Weyhe, — 1875 A, p. 105.
 Woodward, A. S. 1898 B, p. 277.
 Wortman, J. L. 1886 A, p. 408. (Bruta.)
 1896 B, p. 259.
 1897 B.
 Zittel, K. A. 1893 B, p. 117.

Suborder TÆNIODONTA Cope.

- Cope, E. D. 1876 C.
 Ameghino, F. 1897 A, pp. 83, 89.
 Cope, E. D. 1877 K, pp. 85, 157.
 1882 E, p. 146.
 1882 L, p. 72.
 1883 I, p. 79.
 1884 O, pp. 186, 187, 739.
 1887 S, p. 343.
 1888 K.
 1897 A, p. 322.
 1898 B, p. 115.
 Marsh, O. C. 1875 C, p. 221. (Tillodontia, in part.)
 Marsh, O. C. 1897 B. (>Stylinodontia.)
 Osborn, H. F. 1897 F, p. 611. (Ganodontia.)
 1898 A, p. 146. (Ganodontia.)
 Rüttimeyer, L. 1891 A.
 Trouessart, E. L. 1898 A, p. 667. (Ganodontia.)
 Woodward, A. S. 1898 B, p. 277.
 Wortman, J. L. 1885 A, p. 298.
 1896 B, p. 259. (Ganodontia.)
 1897 A. (Ganodontia.)
 1897 B. (Ganodontia.)
 Zittel, K. A. 1893 B, p. 503. (Tillodontia, in part.)

CONORYCTIDÆ.

- Wortman, J. L. 1896 B, p. 260.
 Matthew, W. D. 1897 C, p. 262.
 Trouessart, E. L. 1898 A, p. 667.
 Wortman, J. L. 1897 B, pp. 95, 109.

CONORYCTES Cope. Type *C. comma* Cope.

Cope, E. D. 1881 H, p. 486.

1881 U, p. 829.

1883 E.

1883 Q, p. 168.

1883 EE.

1884 AA, p. 795. (Hexodon, type *H. molestus*.)

1884 O, p. 198.

1888 CC, p. 316.

Nicholson and Lydekker 1889 A, p. 1453.

Osborn and Earle 1895 A, p. 40.

Pavlov, M. 1887 A.

Schlosser, M. 1885 A, p. 684.

1886 B, p. 37.

Scott, W. B. 1892 B, p. 323.

1892 D, p. 80.

Trouessart, E. L. 1898 A, p. 667.

Wortman, J. L. 1896 B, p. 259.

Wortman, J. L. 1897 B, p. 101, 109.

Zittel, K. A. 1893 B, p. 510.

Conoryctes comma Cope.

Cope, E. D. 1881 H, p. 486.

1881 U, p. 829.

1884 AA, p. 796, fig. 3. (Hexodon molestus.)

1884 O, pp. xxxv, 198, pl. xxiii e, figs. 1-5;
pl. xxv c, figs. 3, 4.

1888 CC, pp. 303, 317.

Matthew, W. D. 1897 C, p. 264.

1899 A, p. 29.

Roger, O. 1896 A, p. 89.

Schlosser, M. 1886 B, p. 37.

Trouessart, E. L. 1898 A, p. 667.

Wortman, J. L. 1897 B, p. 101, fig. 36.

Eocene (Puerco); New Mexico.

ONYCHODECTES Cope. Type *O. tisonensis* Cope.

Cope, E. D. 1888 CC, p. 317.

Ameghino, F. 1897 A, p. 84.

Matthew, W. D. 1897 C, p. 266.

Osborn and Earle 1895 A, p. 40.

Scott, W. B. 1892 B, p. 323.

1892 D, p. 80.

Wortman, J. L. 1896 B, p. 258.

1897 B, pp. 97, 109.

Zittel, K. A. 1893 B, p. 510.

Onychodectes rarus Osb. and Earle.

Osborn and Earle 1895 A, p. 42, fig. 13.

Matthew, W. D. 1897 C, p. 264.

1899 A, p. 28.

Roger, O. 1896 A, p. 89.

Trouessart, E. L. 1898 A, p. 667.

Wortman, J. L. 1897 B, p. 100.

Eocene (Puerco); New Mexico.

Onychodectes tisonensis Cope.

Cope, E. D. 1888 CC, p. 318, pl. v, figs. 8, 9.

Matthew, W. D. 1897 C, p. 264.

1890 A, p. 28.

Osborn and Earle 1895 A, p. 40, fig. 12.

Roger, O. 1896 A, p. 89.

Trouessart, E. L. 1898 A, p. 667.

Wortman, J. L. 1897 B, p. 97, figs. 31-34.

Eocene (Puerco); New Mexico.

STYLINODONTIDÆ.

Marsh, O. C. 1875 C, p. 221.

Ameghino, F. 1897 A, p. 89.

Cope, E. D. 1876 C, p. 39. (Ectoganidæ, Calamodontidæ.)

1877 K, p. 157. (Ectoganidæ.)

1884 O, p. 188. (Ectoganidæ, Calamodontidæ.)

1888 CC, p. 310. (Hemiganidæ.)

Flower, W. H. 1876 C, p. 124. (Stylinodontidæ, Ectoganidæ.)

Marsh, O. C. 1876 G, p. 60.

1877 E.

1897 B, p. 137.

Matthew, W. D. 1897 C, p. 262.

Nicholson and Lydekker 1889 A, p. 1410. (Calamodontidæ.)

Roger, O. 1896 A, p. 88. (Calamodontidæ.)

Wortman, J. L. 1896 B, p. 260.

1897 B, pp. 95, 109.

Zittel, K. A. 1893 B, p. 508.

WORTMANIA Hay. Type *Hemiganus otariidens* Cope.

Hay, O. P. 1899 A, p. 593.

Cope, E. D. 1885 L. (Hemiganus, in part.)

1888 CC, p. 311. (Hemiganus, in part.)

Nicholson and Lydekker 1889 A, p. 1453. (Hemiganus, in part.)

Trouessart, E. L. 1898 A, p. 668. (Hemiganus.)

Wortman, J. L. 1897 B. (Hemiganus.)

Zittel, K. A. 1893 B, p. 510. (Hemiganus, in part.)

Wortmania otariidens (Cope.)

Cope, E. D. 1885 L, p. 493. (Hemiganus.)

Cope, E. D. 1888 CC, p. 311, pl. iv; pl. v, figs. 1-7. (Hemiganus.)

Hay, O. P. 1899 A, p. 593. (Wortmania.)

Matthew, W. D. 1897 C, p. 264. (Hemiganus.)

1899 A, p. 28. (Hemiganus.)

Roger, O. 1896 A, p. 89. (Hemiganus.)

Trouessart, E. L. 1898 A, p. 668. (Hemiganus.)

Wortman, J. L. 1897 B, pp. 64, 67, figs. 2, 3. (Hemiganus.)

Zittel, K. A. 1893 B, p. 510. (Hemiganus.)

Eocene (Puerco); New Mexico.

PSITTACOTHERIUM Cope. Type *P. multifragum* Cope.

Cope, E. D. 1882 P, p. 157.

Ameghino, F. 1897 A, p. 89.

Cope, E. D. 1882 E, p. 191.

1882 CC. (Hemiganus, type *H. vultuosus*.)

1883 E.

1883 I, p. 77.

1884 O, pp. 195, 738 (*Psittacotherium*); ex-plan. pl. xxiii c (*Hemiganus*).

1885 L. (*Hemiganus*.)

1887 F, p. 469.

1888 I, p. 4.

1888 CC, p. 311. (*Hemiganus*.)

1889 C.

1897 A, p. 322.

Nicholson and Lydekker 1889 A, p. 1409 (*Psittacotherium*); p. 1453 (*Hemiganus*).

Osborn, H. F. 1897 F, p. 611.

1898 A, p. 145.

Schlosser, M. 1890 C, p. 252.

1892 A, p. 225.

Scott, W. B. 1892 B, p. 323. (*Hemiganus*.)

1892 D, p. 80. (*Hemiganus*.)

Steinmann and Döderlein 1890 A, p. 729. (*Hemiganus*.)

Wortman, J. L. 1896 B. (*Psittacotherium*, *Hemiganus*.)

1897 B, pp. 65, 67 (type of *Hemiganus*=*P. multifragum*); p. 109 (*Hemiganus*, *Psittacotherium*).

Zittel, K. A. 1893 B, p. 508. (*Psittacotherium*, *Hemiganus*.)

Psittacotherium multifragum Cope.

Cope, E. D. 1882 P, p. 157.

1882 E, p. 191 (*P. multifragum*); p. 192 (*P. aspasia*).

1882 CC. (*Hemiganus vultuosus*.)

1884 O, p. 196, pl. xxiii c, figs. 7-12 (*Hemiganus vultuosus*); pl. xxiv b, fig. 2; pl. xxiv b, figs. 3, 4 (*P. aspasia*).

1885 L. (*Hemiganus vultuosus*.)

1887 F, p. 469. (*P. multifragum*, *P. megalodus*.)

1888 I, p. 4, fig. 1.

1888 CC, p. 302 (*P. multifragum*, *P. aspasia*, *P. megalodus*); p. 303 (*Hemiganus vultuosus*).

1889 C, p. 262.

Hay, O. P. 1899 A, p. 593.

Matthew, W. D. 1897 C, pp. 264, 320.

1899 A, p. 29.

Osborn and Earle 1895 A, p. 42.

Roger, O. 1896 A, p. 88 (*P. multifragum*, *P. aspasia*, *P. megalodus*); p. 89 (*Hemiganus vultuosus*).

Wortman, J. L. 1896 B, p. 259.

1897 B, p. 65 *et seq.*, figs. 1, 4, 6-9, 11-13, 15-20; p. 67 (*Hemiganus vultuosus*, a synonym); p. 71 (*P. megalodus* and *P. aspasia*, synonyms).

Zittel, K. A. 1893 B, p. 508, fig. 423 (*P. multifragum*); p. 510 (*Hemiganus vultuosus*).

Eocene (Puerco); New Mexico.

CALAMODON Cope. Type *C. simplex* Cope.

Cope, E. D. 1874 O, p. 5.

1875 A.

1875 C, p. 23.

1876 C.

1877 K, p. 162.

1882 E, p. 146.

1882 L.

1884 O, p. 188.

1888 I, p. 5.

1889 C, p. 262.

1894 I, p. 594. (*Calamodon*, or *Conicodon*.)

1897 A, p. 322.

Flower and Lydekker 1891 A, p. 442.

Major, Fors. 1893 A, p. 209.

Marsh, O. C. 1875 A, p. 151.

Nicholson and Lydekker 1889 A, p. 1410.

Osborn, H. F. 1897 F.

Rütimeyer, L. 1891 A, p. 126.

Schlosser, M. 1890 C, p. 252.

Steinmann and Döderlein 1890 A, p. 730.

Wortman, J. L. 1897 B, pp. 88, 110.

Zittel, K. A. 1893 B, p. 509.

Calamodon arcamœnus Cope.

Cope, E. D. 1874 O, p. 6.

Cope, E. D. 1875 C, p. 24.

1877 K, p. 163, pl. xli, figs. 13-17; pl. xlii, figs. 1-5; pl. xlii, fig. 1.

Matthew, W. D. 1899 A, p. 32.

Roger, O. 1896 A, p. 89.

Zittel, K. A. 1893 B, p. 509. (*Stylinodon*.)

Eocene (Wasatch); New Mexico.

Calamodon simplex Cope.

Cope, E. D. 1874 O, p. 5.

1875 C, p. 24.

1877 K, p. 166, pl. xlii, figs. 6-8; pl. xliii, pl. xlii, figs. 2-5.

1882 E, p. 147.

1884 O, p. 189, pl. xxiv b, fig. 1;? pl. xxiv e, figs. 20-22.

1888 I, p. 5, fig. 2.

1889 C, p. 262, fig. 85.

King, C. 1878 A, p. 377.

Matthew, W. D. 1899 A, p. 32.

Osborn and Wortman 1892 A, p. 83.

Roger, O. 1896 A, p. 89.

Wortman, J. L. 1897 B, p. 89, figs. 22-24.

Zittel, K. A. 1893 B, p. 509. (*Stylinodon*.)

Eocene (Wasatch); Wyoming, New Mexico.

STYLINODON Marsh. Type *S. mirus* Marsh.

Marsh, O. C. 1874 C, p. 532.

Ameghino, F. 1897 A, p. 89.

Cope, E. D. 1875 A.

Flower and Lydekker 1891 A, p. 442.

Marsh, O. C. 1875 A.

1877 E.

1897 B.

Nicholson and Lydekker 1889 A, p. 1410.

- Osborn, H. F. 1897 F, p. 612.
 Wortman, J. L. 1887 F, p. 290.
 1896 B, p. 259.
 1897 A, p. 110.
 Zittel, K. A. 1893 B, p. 509.

Stylinodon cylindrifer (Cope).

- Cope, E. D. 1881 D, p. 184. (Calamodon.)
 1884 O, p. 192, pl. xxiv a, figs. 15, 16. (Calamodon.)
 Matthew, W. D. 1899 A, p. 36.
 Roger, O. 1896 A, p. 89. (Calamodon.)
 Trouessart, E. L. 1898 A, p. 669.

- Wortman, J. L. 1897 B, p. 92, fig. 25.
 Zittel K. A. 1893 B, p. 509.
 Eocene (Wind River, Bridger); Wyoming.

Stylinodon mirus Marsh.

- Marsh, O. C. 1874 C, p. 532.
 King, C. 1878 A, p. 404.
 Marsh, O. C. 1897 B, p. 138, figs. 1-7.
 Matthew, W. D. 1899 A, p. 43.
 Roger, O. 1896 A, p. 89. (Calamodon.)
 Trouessart, E. L. 1898 A, p. 669.
 Wortman, J. L. 1897 B, p. 93, figs. 26-30.
 Eocene (Bridger); Wyoming.

ECTOGENUS Cope. Type *E. gliriformis* Cope.

- Cope, E. D. 1874 O, p. 4.
 1875 C, p. 23.
 1876 A, p. 3.
 1877 K, p. 158.
 1897 A, p. 322.
 Wortman J. L. 1896 B, p. 259.
 1897 B, p. 88.
 Zittel, K. A. 1893 B, p. 510.

Ectoganus gliriformis Cope.

- Cope, E. D. 1874 O, p. 4.
 1877 K, p. 160, pl. xli, figs. 1-12.

- King, C. 1878 A, p. 377.
 Roger, O. 1896 A, p. 89.
 Eocene; New Mexico.

Ectoganus novomehicanus Cope.

- Cope, E. D. 1874 O, p. 6. (Calamodon.)
 1875 C, p. 24. (Calamodon.)
 1877 K, p. 159, pl. xl, figs. 34-39.
 Matthew, W. D. 1899 A, p. 32. (Calamodon.)
 Roger, O. 1896 A, p. 89.
 Eocene (Wasatch); New Mexico.

DRYPTODON Marsh. Type *D. crassus* Marsh.

- Marsh, O. C. 1876 H, p. 403.
 1877 E.
 1897 B, 138.
 Trouessart, E. L. 1898 A, p. 669.
 Wortman, J. L. 1897 B, p. 88, footnote 4.
 Zittel K. A. 1893 B, p. 510.

Dryptodon crassus Marsh.

- Marsh, O. C. 1876 H, p. 403.
 King, C. 1878 A, p. 377.
 Matthew, W. D. 1899 A, p. 32.
 Roger, O. 1896 A, p. 89.
 Trouessart, E. L. 1898 A, p. 669.
 Eocene (Wasatch); New Mexico.

Suborder XENARTHRA.

- Ameghino, F. 1889 A, p. 661. (Gravigrada.)
 Burmeister, H. 1879 B, p. 279 (Phyllophaga); p. 387 (Effodientia).
 Cope, E. D. 1889 C. (Xenarthri.)
 1889 P, p. 657.
 Flower, W. H. 1883 A. (Pilosa.)
 Flower and Lydekker 1891 A, p. 179. (Pilosa.)
 Gadow, H. 1898 A, p. 41.
 Gill, T. 1872 B, pp. 23, 24. (Vermilingua, Tardigrada, Loricata.)

- Haeckel E. 1895 A, p. 490. (Bradytheria.)
 Roger, O. 1896 A, p. 91.
 Trouessart, E. L. 1898 A, p. 1094.
 Wortman, J. L. 1897 B, p. 109.
 Zittel, K. A. 1893 B, p. 124.

Dr. Gill, in Standard Natural History, vol. v, 1884, p. 66, recognized the peculiar character of the vertebræ of this group and employed the adjective term *xenarthral*; but he did not formally name the group.

MEGATHERIIDÆ.

- Ameghino, F. 1889 A, p. 665 (Megatheridæ); p. 690 (Megalonychidæ); p. 740 (Mylodontidæ).
 1894 A, p. 397. (Gravigrada.)
 Burmeister, H. 1866 B, p. 149. (<Gravigrada.)
 Claypole, E. W. 1891 A.
 Cope, E. D. 1889 C.
 1889 P, p. 658.
 1889 R, p. 876.
 Flower, W. H. 1882 A.
 1883 D, p. 384.
 Flower and Lydekker 1891 A, p. 158.
 Gill, T. 1872 B, p. 24.
 Lönnberg, E. 1899 A. (Mylodontidæ.)

- Lydekker, R. 1887 A, p. 85.
 1894 A, p. 70.
 1896 B, p. 102. (Megalotheriidæ.)
 Nicholson and Lydekker 1889 A, p. 1295.
 Roger, O. 1896 A, p. 91 (Megatheridæ); p. 93 (Megalonychidæ); p. 97 (Mylodontidæ).
 Schlosser, M. 1890 C, p. 251.
 Steinmann and Döderlein 1890 A, p. 739.
 Trouessart, E. L. 1898 A, p. 1098 (Megalonychidæ); p. 1107 (Megatheriidæ).
 Zittel, K. A. 1893 B, p. 130 (Megatheridæ); p. 133 (Megalonychidæ); p. 136 (Mylodontidæ).

MEGATHERIUM Cuvier. Type *M. americanum* Cuvier.

- Cuvier, G., 1796, Mag. Encycl., i. (Fide Agassiz.)
 Adam, W. 1834 A.
 Agassiz, L. 1862 C.
 1863 A.
 1863 B.
 Ameghino, F. 1886 A, p. 178.
 1889 A, p. 666.
 Blainville, H. M. D. 1839 A, p. 67.
 1839 C, p. 114.
 1864 A, iv, EE, p. 39, pls. i-iv.
 Bru, D. J. B. 1804 A.
 Buckland, W. 1837 A, i, p. 112.
 Burmeister, H. 1866 B, p. 150.
 1870 A, p. 351.
 1873 A.
 1879 B, p. 285.
 1888 B.
 Clift, W. 1835 A.
 Cope, E. D. 1889 C, p. 188.
 1889 P, p. 660.
 Couper, J. H. 1842 A.
 Cuvier, G., 1798, Table Élément., p. 146.
 1804 B, pp. 376-387, pls. xxiv, xxv.
 1834 A, viii, pt. i, pp. 531-570, pl. ccxvii.
 Dawkins, W. B. 1870 A, p. 233.
 De Kay, J. E. 1842 C, p. 98.
 Desor, E. 1852 A, p. 58.
 Flower, W. H. 1882 A.
 1883 D, p. 385.
 Flower and Lydekker 1891 A, p. 185.
 Gervais, P. 1839 A.
 1873 A, p. 464.
 Giebel, C. G. 1847 A, p. 111.
 Harlan, R. 1825 A, p. 199.
 Holmes, F. S. 1858 B.
 Koken, E. 1888 C, p. 5.
 Leidy, J. 1855 B, pp. 49, 59.
 Lund, P. W. 1841 A, p. 73.
 1842 A.
 Lydekker R. 1887 A, p. 86.
 1894 A, p. 71.
 1896 B, p. 102. (Megalotherium.)
 Nicholson and Lydekker 1889 A, p. 1295.
 Owen, R. 1840 B.
 1840 F, pp. 64, 85.
 1842 D.
 1843 B.
 1845 B, p. 333, pls. lxxxiii, lxxxiv.
 1847 C, p. 66.
 1851 C.
 1852 A.
 1855 B.
 1856 B.
 1858 C.
 1860 D.
 1866 B, p. 402.
 1868 A, p. 274.
 Pander and d'Alton 1818 A.
 Pictet, F. J. 1853 A, p. 264, fig. 216,
 Schmidt, O. 1886 A, p. 115.
 Steinmann and Döderlein 1890 A, p. 739.
 Trouessart, E. L. 1898 A, p. 1108.
 Woodward, A. S. 1898 B, p. 279.
 Zittel, K. A. 1893 B, p. 131.
 Ameghino, F. 1889 A, p. 668, pl. xli, fig. 4; pl. lxxxi, figs. 1-3.
 Blainville, H. M. D. 1864 A.
 Burmeister, H. 1866 B, p. 150, pl. v.
 1873 A, pl. xi.
 1879 B, p. 321.
 1889 A, p. 27, pl. xi, figs. 7, 8.
 Desmarest, A. G., 1822, Mammalogie, p. 365. (M. cuvieri.)
 Flower and Lydekker 1891 A, p. 185, figs. 60-62.
 Gervais and Ameghino 1880 A, p. 135.
 Giebel, C. G. 1847 A, p. 111. (M. cuvieri.)
 Leidy, J. 1877 A, p. 213, pl. xxxiv, figs. 42, 43. (With doubt.)
 Lydekker, R. 1887 A, p. 86.
 1894 A, p. 73, pls. xlv, xlvii.
 Owen, R. 1840 F, p. 100, pls. xxx-xxxii.
 1851 C.
 1855 B, pls. xxii-xxvii.
 1856 B, pls. xxi-xxvi.
 Quenstedt, F. A. 1852 A, p. 44, pl. iii, fig. 13.
 Reinhardt, J. 1875 A, pl. iv, figs. 6, 7.
 Roger, O. 1896 A, p. 91.
 Trouessart, E. L. 1898 A, p. 1109.
 Zittel, K. A. 1893 B, p. 132, figs. 104, 107, 108.
 This species has been recorded with doubt from the phosphate beds of South Carolina. The species had previously been known only from South America.
- Megatherium mirabile Leidy.**
 Leidy, J. 1852 H, p. 117.
 Cooper, W. 1824 A, p. 114, pl. viii. ("Megatherium.")
 1828 A, p. 267. ("Megatherium.")
 Cope, E. D. 1889 P, p. 660.
 Couper, J. H. 1842 A, p. 216.
 1846, in Hodson, W. B. 1846 A.
 Cuvier, G. 1834 A, viii, p. 338. ("Megatherium.")
 De Kay, J. E. 1842 C, p. 98. (M. cuvieri.)
 Habersham, J., in Hodson, W. B. 1846 A, p. 25. (M. cuvieri.)
 Harlan, R. 1825 A, p. 200. (M. cuvieri.)
 1834 B, p. 63. (M. cuvieri.)
 1835 B, p. 269. (M. cuvieri.)
 1842 B, p. 143. ("Megatherium.")
 1843 B, p. 70. (Megatherium.)
 Hodson, W. B. 1846 A.
 Holmes, F. S. 1849 A, p. 197. ("Megatherium.")
 Leidy, J. 1854 A, p. 10.
 1855 B, pp. 49, 59, pl. xv.
 1860 B, p. 111, pl. xx, figs. 8, 8a.
 1869 A, p. 411.
 Lydekker, R. 1887 A, p. 90.
 Lyell, C. 1843 B, p. 128. ("Megatherium.")
 1844 A, p. 323. ("Megatherium.")
 Mitchell, S. L. 1824 A, pl. vi, figs. 12, 13. ("Megatherium.")
 Roger, O. 1896 A, p. 92.
 Trouessart, E. L. 1898 A, p. 1110.
 T. R. D. 1839 A. ("Megatherium.")
 Wyman, J. 1856 A.
 Zittel, K. A. 1893 B, p. 132.
 Pleistocene; Georgia, South Carolina.

Megatherium americanum Cuvier.

Cuvier, G., 1800, in Shaw's "General Zoology," i, p. 165.

MEGALONYX Jefferson. Type *M. jeffersonii* Desm.*Jefferson, Thos.* 1799 A.

Allen, J. A. 1876 A.

Ameghino, F. 1889 A, p. 690.

Amer. Geologist 1891 G, p. 193.

Blainville, H. M. D. 1839 B.

1839 C, p. 116.

1864 A, iv, EE, p. 42, pls. iii, iv.

Bronn, H. G. 1838 A, p. 1253.

Burmeister, H. 1866 B, p. 179.

1879 B, p. 382.

Claypole, E. W. 1891 A.

1897 A.

Cope, E. D. 1871 I, p. 72.

1889 C, p. 186.

1889 P, p. 660, pl. xxxi.

Cuvier, G. 1804 A, pp. 358-376. ("Megalonix.")

1834 A, viii, pt. i, pp. 304-330.

De Kay, J. E. 1842 C, p. 98.

Gervais, P. 1855 A, p. 44.

1873 A, p. 466.

Giebel, C. G. 1847 A, p. 111.

Harlan, R. 1825 A, p. 201.

1835 B, p. 271.

Holmes, F. S. 1858 B.

Leidy, J. 1855 B, pp. 3, 57.

1857 K.

1860 A, p. 107.

Lund, P. W. 1841 A, p. 72.

Lydekker, R. 1887 A, p. 111.

1896 B, p. 105.

Nicholson and Lydekker 1889 A, p. 1299.

Owen, R. 1840 F, p. 64.

1842 D.

1843 B.

1845 B, p. 333.

1852 A.

1866 B, p. 411.

Pictet, F. J. 1853 A, p. 268, pl. viii, figs. 1-3.

Reinhardt, J. 1879 A.

Safford, J. M. 1892 A.

1892 B.

Trouessart, E. L. 1898 A, p. 1106.

Wheatley, C. M. 1871 A.

Wistar, C. 1799 A.

Wortman, J. L. 1897 B.

Wyman, J. 1850 D.

Zittel, K. A. 1893 B, p. 134.

Megalonyx dissimilis Leidy.*Leidy, J.* 1855 B, pp. 45, 57, pl. xvi, figs. 8, 15.

Cope, E. D. 1889 P, p. 660.

1896 F, p. 379. (Syn. of *M. jeffersonii*.)

Cuvier, G. 1804 A, pl. xxiii, fig. 13. ("Megalonix.")

1834 A, pl. cxxvi, fig. 13. ("Megalonyx.")

Leidy, J. 1852 H, p. 117. (No description.)

1854 A, p. 9. (No description.)

1869 A, p. 412.

Roger, O., 1896 A, p. 96.

Trouessart, E. L. 1898 A, p. 1106.

Wailles, B. L. C. 1854 A, p. 286.

Pleistocene; Mississippi.

Prof. Cope (1896 F, p. 379) regards this species, described by Leidy, as synonymous with *M. jeffersonii*.

Megalonyx jeffersonii (Desmarest).*Desmarest, A. G.*, 1822, Mammalogie, p. 366. (Megalotherium.)

Bronn, H. G. 1838 A, p. 1255, pl. xlv, fig. 10.

Burmeister, H. 1866 B, p. 180.

Claypole, E. W. 1891 A. ("Megalonyx"; this species?)

1897 A. ("Megalonyx"; this species?)

Cooper, W. 1831 A, pp. 171, 206.

1833 A. ("Megalonyx.")

Cooper, Smith, and De Kay 1831 A, p. 371.

Cope, E. D. 1869 E, p. 172.

1889 P, p. 660.

1893 A, p. 50.

1896 F, p. 379.

1899 A, p. 210.

Cope and Wortman 1884 A, p. 39, pl. v, figs. 1, 2.

Cuvier, G. 1804 A, pp. 358-376, pl. xxiii, except fig. 13. ("Megalonyx.")

1834 A, viii, pt. i, p. 304; pl. cxxvi, except fig. 13. ("Megalonyx.")

De Kay, J. E. 1842 C, p. 99.

Dickeson, M. W. 1846 A, p. 106.

Harlan, R. 1825 A, p. 201.

1831 A, p. 269, pls. xii-xiv (*M. laqueatus*; *M. jeffersonii*); p. 384 (*Aulaxodon s. Pleurodon*).

1831 B, p. 74.

1834 B, p. 65 (*M. jeffersonii*); p. 67 (*M. laqueatus*.)1835 A, p. 273. (*M. laqueatus*.)1835 B, p. 271. (*M. laqueatus*.)1835 C, p. 319, pls. xii-xiv; pl. xv, figs. 5-7. (*M. laqueatus*.)1843 A, p. 209. (*M. laqueatus*, in part.)*Jefferson, Thos.* 1799 A. ("Megalonyx.")

Kindle, E. M. 1898 A, p. 485.

Leidy, J. 1852 H, p. 117. (*M. jeffersonii*; *M. potens*.)

1854 A, p. 9.

1854 I, p. 200.

1855 B, pp. 3, 57, pls. i-xiii.

1860 A, p. 107, pl. vi, fig. 1.

1869 A, pp. 411, 412.

1870 H, p. 13.

1889 E, p. 27.

Lesley, J. P. 1889 A, p. 333.

Lindahl, J. 1892 A, pl. v, figs. 2, 4, 6.

Lund, 1839 A, p. 573.

Lydekker, R. 1887 A, p. 111.

1896 B, p. 107.

Lyell, C. 1843 B, p. 128. ("Megalonyx.")

1844 A, p. 323. ("Megalonyx.")

Mercer, H. C. 1897 A, figs. 1-26.

Nicholson and Lydekker 1889 A, p. 1229.

Orton, E. 1891 A.

Owen, D. D. 1857 A, p. 273.

Owen, R. 1840 F, pp. 64, 99, pl. xvii, fig. 1.

1842 D.

1843 B, p. 343.

Quenstedt, F. A. 1852 A, p. 44, pl. i, fig. 1.

1885 A, p. 61, pl. i, fig. 15.

Rafinesque, C. S., 1832, Atlantic Jour., p. 18. (*Aulaxodon speleum*.)

- Roger, O. 1896 A, p. 96.
 Steinmann and Döderlein 1890 A, p. 741.
 Troost, G. 1835 A, p. 144.
 Trouessart, E. L. 1898 A, p. 1106.
 Wailes, B. L. C. 1854 A, p. 286.
 Ward, H. A. 1864 A.
 Wistar, C. 1799 A, p. 526, pls. i, ii. ("Megalonyx.")
 Wortman, J. L. 1897 B, p. 73, figs. 5, 10.
 Wyman, J. 1850 A, p. 58, figs. 1-3. (M. laqueatus.)
 1862 A, p. 422.
 Zittel, K. A. 1893 B, p. 134, fig. 110.
 Pleistocene; West Virginia, Northern Illinois, Indiana, Ohio, Kentucky, Tennessee, Alabama, Mississippi, Florida.

Megalonyx leidyi Lindahl.

- Lindahl, J. 1892 A, pp. 1-10, pls. i-iv; pl. v, figs. 1, 3, 5, 7-9.
 Cope, E. D. 1889 P, p. 660, pl. xxxi. ("Megalonyx.")
 1893 A, p. 49.
 Roger, O. 1896 A, p. 96.
 Trouessart, E. L. 1898 A, p. 1106.
 Udden, J. A. 1891 A, p. 342.
 Williston, S. W. 1897 I, p. 304.
 1898 I, p. 93.
 Pliocene; Kansas.

Megalonyx leptostomus Cope.

- Cope, E. D. 1893 A, p. 49, pl. xiii, figs. 1-3.
 Matthew, W. D. 1899 A, p. 75.
 Roger, O. 1896 A, p. 96.
 Trouessart, E. L. 1898 A, p. 1106.
 Pliocene (Blanco); Texas.

Megalonyx loxodon Cope.

- Cope, E. D. 1871 I, p. 74, figs. 1, 2.
 1889 P, p. 660.
 1896 F, p. 379.
 1899 A, p. 211.
 Lesley, J. P. 1889 A, p. 383, figures.

- Roger, O. 1896 A, p. 96.
 Trouessart, E. L. 1898 A, p. 1107.
 Pleistocene; Pennsylvania.

Megalonyx scalper Cope.

- Cope, E. D. 1899 A, p. 218, pl. xviii, figs. 2, 2a.
 Pleistocene; Pennsylvania.
 According to Cope this may be the same species as *Ereptodon priscus*.

Megalonyx tortulus Cope.

- Cope, E. D. 1871 I, p. 84, fig. 12.
 1889 P, p. 660.
 1896 F, p. 379.
 1899 A, p. 217.
 Lesley, J. P. 1889 A, p. 384, figures.
 Roger, O. 1896 A, p. 96.
 Trouessart, E. L. 1898 A, p. 1107.
 Pleistocene; Pennsylvania.

Megalonyx validus Leidy.

- Leidy, J. 1868 A, p. 175.
 Cope, E. D. 1871 I, p. 80.
 Leidy, J. 1869 A, p. 412, pl. xxx, fig. 6.
 Roger, O. 1896 A, p. 96.
 Trouessart, E. L. 1898 A, p. 1106.
 Pleistocene; Texas.

Megalonyx wheatleyi Cope.

- Cope, E. D. 1871 I, p. 75, figs. 3-6; fig. 10.
 1871 F. (M. dissimilis, not of Leidy.)
 1871 I, p. 83, fig. 11 (M. sphenodon); figs. 7-8 (M. dissimilis).
 1893 A, p. 50. (M. wheatleyi, M. dissimilis.)
 1896 F, p. 378.
 1899 A, pp. 210, 211, 212.
 Lesley, J. P. 1889 A, p. 384, figures. (M. sphenodon, M. wheatleyi.)
 Roger, O. 1896 A, p. 96.
 Trouessart, E. L. 1898 A, p. 1107.
 Pleistocene; Pennsylvania.

EREPTODON Leidy. Type *E. priscus* Leidy.

- Leidy, J. 1853 E.
 1855 B, pp. 46, 58.
 Trouessart, E. L. 1898 A, p. 1106. (Syn.? of Megalonyx.)
 Zittel, K. A. 1893 B, p. 134. (Syn.? of Megalonyx.)
Ereptodon priscus Leidy.
 Leidy, J. 1853 E.

- Cope, E. D. 1899 A, p. 219.
 Leidy, J. 1855 B, pp. 46, 58, pl. xiv, figs. 9, 10; pl. xvi, fig. 18.
 1869 A, p. 412.
 Roger, O. 1896 A, p. 96. (Megalonyx.)
 Trouessart, E. L. 1898 A, p. 1106. (Megalonyx.)
 Wailes, B. L. C. 1854 A, p. 286.
 Pleistocene; Mississippi.

MYLODON Owen. Type *M. harlani* Owen.

- Owen, R. 1840 F, p. 63.
 Ameghino, F. 1889 A, p. 741.
 1898 A, p. 324.
 Blainville, H. M. D. 1864 A, iv, EE, p. 39, pls. i-iv.
 Bronn, H. G. 1838 A, p. 1256. ("Orycterotherium?")
 Burmeister, H. 1865 B.
 1866 B, p. 160.
 1879 B, p. 345.
 Cope, E. D. 1882 FF, p. 923.
 1889 C, p. 188.
 1889 P, p. 660.

- Desor, E. 1852 A, p. 58.
 Flower and Lydekker 1891 A, p. 189.
 Gervais, P. 1855 A, p. 45.
 1873 A, p. 467.
 Gervais and Ameghino 1880 A, p. 155.
 Giebel, C. G. 1847 A, p. 117.
 Harlan, R. 1842 B, p. 141. (Aulaxodon seu Pleurodon, in part.)
 1842 C, p. 111. (Orycterotherium, type *O. missouriense*.)
 1843 A.
 1843 B. (Orycterotherium.)

- Leidy, J. 1853 E. (*Eubradys*, type *E. antiquus*.)
1855 B, pp. 47, 58.
Lönnberg, E. 1899 A.
Lydekker, R. 1887 A, p. 104.
1894 A, p. 77.
1896 B, p. 105.
Marsh, O. C. 1883 B.
Nicholson and Lydekker 1889 A, p. 1298.
Owen, R. 1840 F, p. 57. (*Glossotherium*.)
1842 D.
1843 B.
1845 C.
1852 A.
1855 B.
1856 B.
1858 C.
1860 D.
1866 B, p. 400.
Pictet, F. J. 1853 A, p. 269.
Reinhardt, J. 1866 A.
1879 A.
Schmidt, O. 1886 A, p. 115.
Steinmann and Döderlein 1890 A, p. 740.
Wortman, J. L. 1897 B.
Zittel, K. A. 1893 B, p. 137.
- Mylodon harlani** Owen.
Owen, R. 1840 F, pp. 68, 69, pl. xvii, figs. 3, 4.
Carpenter, W. M. 1846 A, p. 249. (*Orycterotherium*;" identification very doubtful.)
Claypole, E. W. 1891 A.
Cooper, W. 1831 A, p. 172. ("Megalonyx.")
1833 A, p. 166. ("Megalonyx.")
Cope, E. D. 1871 I, p. 85.
1889 P, p. 666. (*M. laqueatus*.)
1896 H, p. 458, pl. x, figs. 1, 2. (*M. harlanii*.)
1899 A, p. 210. (*M.?* *harlanii*.)
Dickeson, M. W. 1846 A. (*Megalonyx laqueatus*.)
Flower and Lydekker 1891 A, p. 189.
Giebel, C. G. 1847 A, p. 118.
Harlan, R. 1831 B, p. 74, in part; pl. iii, figs. 1-3. (*Megalonyx laqueatus*.)
1835 C, p. 334, pl. xv, figs. 2-4. (*Megalonyx laqueatus*.)
1842 A, p. 392. ("Orycterotherium.")
1842 B, p. 141 (*Megalonyx laqueatus*, *Aulaxodon* *seu* *Pleurodon*, in part); p. 142 (*Orycterotherium missouriense*.)
1842 C, p. 111. (*Orycterotherium missouriense*.)
1843 A, p. 209 (*Megalonyx laqueatus*); p. 210 (*Orycterotherium missouriense*.)
1843 B, pls. i-iii. (*Megalonyx laqueatus*, *Orycterotherium missouriense*.)
Holmes, F. S. 1858 B. ("Megalonyx.")
Leidy, J. 1853 E. (*Eubradys antiquus*.)
1854 A, p. 10.
1855 B, pp. 47, 58, pl. xiv, figs. 1-3; pl. xvi, figs. 19, 20.

MOROTHERIUM Marsh.

- Marsh, O. C.* 1874 C, p. 531.
Flower and Lydekker 1891 A, pp. 190, 413. (Syn. of *Chalicotherium*.)
Marsh, O. C. 1876 G, p. 61.

- Leidy, J.* 1860 B, p. 111, pl. xx, figs. 7-7b.
1869 A, p. 413.
1871 C, p. 365.
1884 A.
1885 B. (*M. harlani*; ?*Orycterotherium missouriense*.)
1889 F, p. 33, pl. v, figs. 1-4.
Lydekker, R. 1887 A, p. 106.
Lyell, C. 1843 B, p. 128. ("Mylodon.")
1844 A, p. 323. (*Megalonyx*.)
Nicholson and Lydekker 1889 A, p. 1299.
Owen, R. 1842 D.
1843 B, p. 341. (*M. harlani*, *Megalonyx laqueatus*.)
1845 B, p. 335.
1845 C.
Perkins, H. C. 1842 A. ("Mylodon": identification doubtful.)
1843, in *Harlan R.* 1843 B, p. 80. (*Orycterotherium oregonense*.)
1844 A, p. 135. (*Orycterotherium oregonense*.)
Pictet, F. J. 1853 A, p. 270.
Roger, O. 1896 A, p. 98.
Trouessart, E. L. 1898 A, p. 1115.
Wailles, B. L. C. 1854 A, p. 286.
Williston, S. W. 1895 A, p. 175, figs. 1, 2. (Identification doubtful.)
Wilson, T. 1892 A. ("Mylodon.")
Zittel, K. A. 1893 B, p. 138. (*M. laqueatus*.)
In addition to the above a few references, mostly of minor importance, may be found in *Leidy, J.* 1869 A, pp. 413, 414.
Pleistocene; Kentucky, Missouri, Louisiana, Mississippi, South Carolina, Oregon, Kansas?, Pennsylvania?.
- Mylodon renidens** Cope.
Cope, E. D. 1896 H, p. 460, pl. x, fig. 3; pl. xi, figs. 5, 6.
Roger, O. 1896 A, p. 98.
Trouessart, E. L. 1898 A, p. 1116.
Pleistocene; Louisiana.
- Mylodon sodalis** Cope.
Cope, E. D. 1878 H, p. 385.
1889 F.
1889 P, p. 660, fig. 1.
1889 S, pp. 978, 980.
1893 A, p. 87.
Roger, O. 1896 A, p. 98. (Syn. of *M. harlani*.)
Trouessart, E. L. 1898 A, p. 1116. (Syn. of *M. harlani*.)
Pliocene; Oregon, Texas?.
- Mylodon sulcidens** Cope.
Cope, E. D. 1896 H, p. 462, pl. x, fig. 4; pl. xi, fig. 7.
Roger, O. 1896 A, p. 98.
Trouessart, E. L. 1898 A, p. 1116.
Pleistocene; Louisiana.

Type *M. gigas* Marsh.

- Marsh, O. C.* 1883 B.
1892 D, p. 448.
1897 B, p. 144.
Zittel, K. A. 1893 B, p. 136.

Morotherium gigas Marsh.

- Marsh, O. C. 1874 C, p. 531.
 King, C. 1878 A, p. 443.
 Marsh, O. C. 1897 B, p. 143, figs. 8, 9.
 Roger, O. 1896 A, p. 96.
 Trouessart, E. L. 1898 A, p. 1107.
 Pliocene; California.

Morotherium leptonyx Marsh.

- Marsh, O. C. 1874 C, p. 532.
 King, C. 1878 A, p. 443.
 Roger, O. 1896 A, p. 96.
 Trouessart, E. L. 1898 A, p. 1107.
 Pliocene; Idaho.

GLYPTODONTIDÆ.

- Ameghino, F. 1883 A. (Glyptodontes.)
 1889 A, p. 758 (Glyptodontia); p. 775 (Glyptodontidæ).
 Burmeister, H. 1865 A.
 1865 C.
 1866 B, p. 183. (Biloricata.)
 1871 B.
 1872 A. ("Glyptodonten.")
 1874 A.
 1879 A.
 1879 B, p. 388. (Loricata.)
 Cope, E. D. 1889 C, p. 207.
 1889 P, p. 658.
 Flower, W. H. 1882 A.
 Flower and Lydekker 1891 A, p. 202.

- Gadow, H. 1898 A, p. 42. (Dasypodidæ, part.)
 Lydekker, R. 1887 A, p. 114.
 1894 A, p. 1.
 1896 B, p. 94.
 Mercerat, A., 1891, *Revista Mus. La Plata*, ii, p. 27
 (Hoplophoridae.)
 Nicholson and Lydekker 1889 A, p. 1292.
 Reh, L. 1895 A, p. 170.
 Roger, O. 1896 A, p. 101.
 Schlosser, M. 1890 C, p. 251.
 Steinmann and Döderlein 1890 A, p. 738.
 Trouessart, E. L. 1898 A, p. 1123.
 Woodward, A. S. 1898 B, p. 282.
 Zittel, K. A. 1893 B, p. 144.

GLYPTODON Owen. Type *G. clavipes* Owen.

- Owen, R., 1838, Parish's Buenos Ayres and La Plata.
 p. 178 B.
 Ameghino, F. 1883 A.
 1889 A, p. 775.
 1892 A, p. 22.
 Blainville, H. M. D. 1864 A, iv, EE, p. 47, pls. i, ii.
 Burmeister, H. 1864 A.
 1865 A.
 1865 C.
 1866 A.
 1866 B, p. 185.
 1871 A.
 1871 B.
 1874 A.
 1879 A.
 1879 B, p. 420.
 Cope, E. D. 1889 P, p. 662.
 Flower, W. H. 1883 D, p. 387, figs. 39, 40.
 Flower and Lydekker 1891 A, p. 202.
 Giebel, C. G. 1847 A, p. 109.
 Hale, C. S. 1848 A, p. 357.
 Holmes, F. S. 1858 B.
 Huxley, T. H. 1865 A.
 1872 A, p. 291.
 Koken, E. 1888 C.
 Lund, P. W. 1839 B, p. 218. (Hoplophorus.)
 Lydekker, R. 1887 A, p. 114.
 1894 A, p. 3.
 1896 B, p. 96.
 Meyer, H. 1865 A.
 Natural Science 1893 A, p. 140, fig. 2.
 Nicholson and Lydekker 1889 A, p. 1293.
 Owen, R. 1840 B.
 1845 A.
 1847 C, p. 67.
 Pictet, F. J. 1853 A, p. 273.
 Pouchet, G. 1866 A.
 Quenstedt, F. A. 1885 A, p. 63.

- Reinhardt, J. 1875 A.
 Röse, C. 1892 D, p. 511.
 Serres, M. 1865 A.
 1865 B.
 Steinmann and Döderlein 1890 A, p. 738.
 Trouessart, E. L. 1898 A, p. 1125.
 Woodward, A. S. 1898 B, p. 283.
 Zittel, K. A. 1893 B, p. 144.

Glyptodon euphractus Lund.

- Lund, P. W., 1838, Overs. K. Danske Vid. Selskab.
 Forh. viii, p. lii. (Hoplophorus.)
 Ameghino, F. 1883 A, p. 28.
 1889 A, p. 781, pl. liii, fig. 8.
 Burmeister, H. 1871 A, pl. viii. (Hoplophorus.)
 1879 B, p. 410. (Hoplophorus.)
 Gervais and Ameghino 1880 A, p. 202. (*G. euphractus*, *G. sellowi*.)
 Leidy, J. 1889 E, p. 25. (Hoplophorus *oriatus*?)
 1892 A, p. 129. (Hoplophorus.)
 Lund, P. W. 1839 B, p. 218. (Hoplophorus.)
 1841 A, p. 70, pl. i, fig. 11; pl. xi; pl. xiv; pl. xv, figs. 1-7. (Hoplophorus.)
 1842 A, pl. xxxv, figs. 1-4. (Hoplophorus.)
 Lydekker, R. 1887 A, p. 121.
 1894 A, p. 11.
 Owen, R. 1868 A, p. 273.
 Pouchet, G. 1866 A, p. 337, pls. ix, x. (Hoplophorus.)
 Reinhardt, J. 1875 A, p. 165. (Hoplophorus, *Schistopleurum*.)
 Roger, O. 1896 A, p. 101.
 Trouessart, E. L. 1898 A, p. 1127.
 Pliocene; South America, Florida.
Glyptodon petaliferus Cope.
 Cope, E. D. 1888 N, p. 345.

Cope, E. D. 1889 F.

1889 P, p. 662.

1892 AA, p. 130.

Leidy, J. 1889 E, p. 25, pl. iv, fig. 9.

Roger, O. 1896 A, p. 103.

Trouessart, E. L. 1898 A, p. 1127.

Zittel, K. A. 1893 B, p. 147.

Pliocene: Mexico, Texas, Florida.

Glyptodon reticulatus Owen.

Owen, R., 1845, Cat. Foss. Mam. Aves. Roy. Coll. Surg., p. 119.

Ameghino, F. 1883 A, p. 28. (G. asper.)

1889 A, p. 784, pl. 1, figs. 1-8; pl. li, figs. 1, 2; pl. lii, figs. 1-3; pl. liv, figs. 1-11.

Burmeister, H. 1864 A, p. 75.

1866 B, p. 200, pl. vi; pl. vii, figs. 4-6; pl. viii, fig. 6 (G. asper, original description); p. 205 (G. reticulatus).

Burmeister, H. 1874 A, p. 268, pls. xxiii, xxiv, xixv; pl. xxv, fig. 1; pl. xxviii, fig. 1; pl. xxix, figs. 4, 6; pl. xxx, figs. 1, 4; pl. xxxi; pl. xxxii, fig. 2; pl. xxxiii, figs. 2, 3, 5, 6; pl. xxxiv, fig. 2; pl. xxxvii; pl. xl, fig. 1 (G. asper); p. 385 (G. reticulatus).

1879 B, p. 422 (G. reticulatus); p. 424 (Schistopleurum asperum).

Gervais and Ameghino 1880 A, p. 198. (G. typus.)

Leidy, J. 1889 E, p. 27, pl. v, figs. 11, 12. (G. asper.) 1892 A. (G. asper.)

Lydekker, R. 1887 A, p. 117.

1894 A, p. 5.

Nodot, L. 1855 A. (Schistopleurum.)

Roger, O. 1896 A, p. 102.

Trouessart, E. L. 1898 A, p. 1125.

Additional synonymy and literature in Ameghino, F. 1889 A, p. 784.

Pliocene; South America, Florida.

Tomiopsis Cope. Type *T. ferruminatus* Cope.

Cope, E. D. 1893 E, p. 317.

The position of this genus is uncertain.

Tomiopsis ferruminatus Cope.

Cope, E. D. 1893 E, p. 317.

Neocene?; Texas.

DASYPODIDÆ.

Broom, R. 1897 A.

Burmeister, H. 1879 B, p. 426. (Dasypidæ.)

1883 A. (Genus Eutatus.)

Cope, E. D. 1889 P, p. 658.

Flower, W. H. 1868 A.

1882 A.

1883 D, p. 386.

1885 A.

Flower and Lydekker, 1891 A, p. 194.

Gadow, H. 1898 A, p. 42. (Dasypodidæ, part.)

Giebel, C. G. 1867 A, p. 545. (Dasypus.)

Gill, T. 1872 B, p. 24.

Gray, J. E. 1869 A, p. 377.

Hæckel, E. 1895 A, p. 516. (Dasypodida.)

Huxley, T. H. 1872 A, p. 290.

Lydekker, R. 1887 A, p. 135.

1894 A, p. 51.

1896 B, p. 94.

Nicholson and Lydekker 1889 A, p. 1291.

Owen, R. 1882 A. (Dasypodæ.)

1851 C, p. 743. (Dasypus.)

1855 B, p. 381.

Roemer, F. 1892 A, p. 525.

1893 A,

Roger, O. 1896 A, p. 107.

Schlosser, M. 1890 C, p. 251.

Steinmann and Döderlein 1890 A, p. 739.

Weber, M. 1893 A.

1893 B.

Zittel, R. A. 1893 B, p. 150. (Subord. Dasypoda.)

Chlamytherium Lund. Type *C. humboldtii* Lund.

Lund, P. W., 1838, Overs. K. Danske Vid. Selsk.

Forh. viii, p. lii.

Ameghino, F. 1883 A. pp. 23, 33.

1886 A, p. 203.

Flower and Lydekker 1891 A, p. 201.

Gervais and Ameghino 1880 A, p. 211.

Lydekker, R. 1887 A, p. 135.

1894 A, p. 52.

Lund, P. W. 1839, A, p. 572.

1839, B, p. 217.

1841 A, pp. 69, 232.

1842 A, p. 137, pl. xxxiv; pl. xxxv, fig. 5.

Pictet, F. J. 1853 A, p. 274.

Röse, C. 1892 D, p. 516.

Zittel, K. A. 1893 B, p. 151.

The name of this genus is usually spelled *Chlamydothierium*; but the original form is that here given. The original description is adequate.

Chlamytherium humboldtii Lund.

Lund, P. W., 1838, Overs. K. Danske Vid. Selsk.

Forh., viii, p. lii.

Ameghino, F. 1883 A, p. 33.

Cope, E. D. 1889 P, p. 662 ("Glyptodon floridanus¹ Leidy.")

1892 AA, p. 130.

Leidy, J. 1889 B, p. 97. (Glyptodon septentrionalis.)

1889 E, p. 24, pl. iv, figs 3-6.

1892 A.

Lund, P. W. 1839 B, p. 217.

1841 A, p. 69, pl. i, figs. 7-10, 12, 13; pl. ii, figs.

1-3; pl. xii, figs. 1, 6, 7; pl. xiii, figs. 2, 6,

7-11; pl. xiv, fig. 1.

1842 A, p. 137, pl. xxxiv; pl. xxxv, fig. 5.

Lydekker, R. 1887 A, p. 136.

1896 B, p. 96.

¹ The writer has made search in Leidy's papers without finding this name. It occurs in neither Leidy's nor Cope's lists in Bull. No. 84, U. S. Geol. Survey (Correlation paper). The name is probably due to an error on part of Professor Cope.

Roger, O. 1896 A, p. 103 (*Glyptodon septentrionalis*); p. 108 (*C. humboldti*).
 Trouessart, E. L. 1898 A, p. 1127 (*Glyptodon septentrionalis*); p. 1137 (*C. humboldti*).

Zittel, K. A. 1893 B, p. 147 (*Glyptodon floridanus*¹); p. 152 (*C. humboldti*).
 Pliocene; South America, Florida.

Order SIRENIA.

Allen, J. A. 1881 A.
 Baur, G. 1887 A, p. 493.
 Brandt, J. F. 1862 A.
 1862 B.
 1868 A.
 Cope, E. D. 1880 B, p. 456.
 1887 S, p. 342.
 1889 C, p. 142.
 1889 R, pp. 874, 876.
 1890 F.
 1898 B, p. 109.
 Cuvier, G. 1834 A, viii, pt. ii, pp. 1-74, pls. ccxx, ccxxi.
 Flot, L. 1886 A.
 1886 B.
 Flower, W. H. 1876 B, xiii, p. 409.
 1883 A.
 1883 D, p. 389.
 1885 A.
 Flower and Lydekker 1891 A, p. 212.
 Gadow, H. 1898 A, p. 42.
 Gegenbaur, C. 1898 A.
 Gervais, P. 1874 B, p. 578. ("Sirénides.")
 Gill, T. 1872 A, p. 301.
 1872 B, pp. 13, 48, 91.
 1873 A.
 Gill and Coues, 1877 A, p. 1041.
 Gray, J. E. 1866 A, p. 356.
 Hæckel, E. 1895 A, p. 567.
 Hay, O. P. 1899 F, p. 682.
 Huxley, T. H. 1872 A, p. 330.

Krauss, F. 1858 A.
 1862 A.
 1870 A.
 Kükenthal, W. 1890 C.
 1897 A.
 Lartet, E. 1866 A.
 Lepsius, G. R. 1881 A. (Sirenia.)
 Lydekker, R. 1892 A.
 1896 B,
 Marsh, O. C. 1877 E.
 Nicholson and Lydekker 1889 A, p. 212.
 Owen, R. 1866 B, p. 429.
 1868 A, p. 283.
 1875 A.
 1875 B.
 Parker, W. K. 1868 A, p. 218.
 Roger, O. 1896 A, p. 247.
 Ryder, J. A. 1878 A.
 1885 D.
 Schlosser, M. 1889 A.
 1890 D.
 Schmidt, O. 1886 A, p. 242.
 Seeley, H. G. 1888 N, p. 131.
 Slade, D. D. 1888 A, p. 244.
 Steinmann and Döderlein 1890 A, p. 708.
 Tomes, C. S. 1898 A, p. 385.
 Trouessart, E. L. 1898 A, p. 999.
 Woodward, H. 1885 D.
 Zigno, A. de 1887 A.
 Zittel, K. A. 1893 B, pp. 187, 201, 740.

PRORASTOMIDÆ.

Cope, E. D. 1889 R, p. 876.
 1890 F, p. 698.
 Flower and Lydekker 1891 A, p. 224. (*Haliitheriidæ*.)
 Gadow, H. 1898 A, p. 43.
 Hæckel, E. 1895 A, p. 566. (*Halicorida*.)
 Zittel, K. A. 1893 B, p. 194.

This family is based on *Prorastomus sirenoides*,

Owen, found in the island of Jamaica. The following references are given to the literature of this animal: Owen, R. 1855 C; Owen, R. 1875 B, pls. xxviii, xxix; Leidy, J. 1869 A, p. 414; Trouessart, E. L. 1898 A, p. 999; Thomas and Lydekker 1897 A, p. 599; Lepsius, G. R. 1881 A; Tomes, C. S. 1898 A, p. 390.

HALITHERIIDÆ.

Gill, T. 1872 B, pp. 13, 91, 92.
 Brandt, J. F. 1868 A, p. 344. (<*Halicorida*.)
 Cope, E. D. 1889 R, p. 876.
 1890 F, p. 698.
 1898 B, p. 110.
 Flower and Lydekker 1891 A, p. 222.

Lepsius, G. R. 1881 A. (*Halitherium*.)
 Lydekker, R. 1887 A, p. 5.
 Nicholson and Lydekker 1889 A, p. 1310.
 Roger, O. 1896 A, p. 247.
 Trouessart, E. L. 1898 A, p. 1004. (*Halicoridæ*.)
 Zittel, K. A. 1893 B, p. 195. (<*Halicoridæ*.)

DIOPLOTHERIUM Cope. Type *D. manigaultii* Cope.

Cope, E. D. 1883 N.
 1883 X.
 1890 F, p. 698.

Flower, W. H. 1885 A, p. 223.
 Flower and Lydekker 1891 A, p. 223.
 Nicholson and Lydekker 1889 A, p. 1311.

¹The writer has made search in Leidy's papers without finding this name. It occurs in neither Leidy's nor Cope's lists in Bull. No. 84, U. S. Geol. Survey (Correlation paper). The name is probably due to an error on part of Professor Cope.

Zittel, K. A. 1893 B, p. 201.

It is not at all certain that this genus belongs among the Sirenia.

Dioplotherium manigaultii Cope.

Cope, E. D. 1883 N.

HEMICAULODON Cope. Type *H. effodiens* Cope.

Cope, E. D. 1869 E, p. 190.

1883 N, p. 52.

Zittel, K. A. 1893 B, p. 201.

A genus of uncertain position.

Hemicaulodon effodiens Cope.

Cope, E. D. 1869 E, p. 191, pl. v, fig. 6.

Cope, E. D. 1883 X.

1890 F, p. 698, pl. xxv, figs. 1-5.

Roger, O. 1896 A, p. 249.

Trouessart, E. L. 1898 A, p. 1006.

Tertiary (Phosphate beds); South Carolina.

Brandt, J. F. 1873 A, p. 290.

Cope, E. D. 1890 F, p. 699.

Leidy, J. 1869 A, p. 440.

Roger, O. 1896 A, p. 249.

Trouessart, E. L. 1898 A, p. 1006.

Eocene; New Jersey.

DESMOSTYLUS Marsh. Type *D. hesperus* Marsh.

Marsh, O. C. 1888 B, p. 95.

Flower and Lydekker 1891 A, p. 223.

Nicholson and Lydekker 1889 A, p. 1310.

Zittel, K. A. 1893 B, p. 201.

A genus of doubtful position.

Desmostylus hesperus Marsh.

Marsh, O. C. 1888 B, p. 95, figs. 1-3.

Roger, O. 1896 A, p. 249.

Trouessart, E. L. 1898 A, p. 1006.

Tertiary; California.

TRICHECHIDÆ.

Gill, T. 1872 B, pp. 14, 91.

Blainville, H. M. D. 1864 A, iii, U, pls. i-xi. ("Lamantinos.")

Brandt, J. F. 1868 A, p. 343. (Manatida.)

Cope, E. D. 1890 F, p. 700. (Manatida.)

Flower, W. H. 1885 A, p. 215. (Manatida.)

Flower and Lydekker 1891 A, p. 215. (Manatida.)

Gray, J. E. 1866 A, p. 357. (Manatida.)

Haeckel, E. 1895 A, p. 566. (Manatida.)

Nicholson and Lydekker 1889 A, p. 1311. (Manatida.)

Roger, O. 1896 A, p. 247. (Manatida.)

Trouessart, E. L. 1898 A, p. 999. (Manatida.)

Zittel, K. A. 1893 B, p. 195. (Manatida.)

TRICHECHUS Linn. Type *T. manatus* Linn.

Linnaeus, C., 1758, Syst. Nat., ed., 10, i, p. 34.

Unless otherwise indicated, the following writers employ for the genus the name *Manatus*.

Allen, J. H. 1846 A.

Baikie, B. 1857 A.

Blainville, H. M. D. 1864 A, iii, U, plates.

Brandt, J. F. 1862 A.

1862 B.

1868 A.

Cope, E. D. 1890 F, p. 700.

Cuvier, G. 1834 A, viii, pt. ii, pp. 16-40, pl. ccxx, figs. 1, 2. (No generic name.)

Flower, W. H. 1876 B, xiii, p. 410.

1885 A.

Flower and Lydekker 1891 A, p. 215.

Gill, T. 1873 A.

Gray, J. E. 1857 A.

Harlan, R. 1834 B, p. 73.

1835 B, p. 278.

1835 J, p. 385.

Howes and Harrison 1893 A.

Kneeland, S. 1850 A.

Krauss, F. 1858 A.

1862 A.

Kükenthal, W. 1890 C.

1891 C.

1896 A.

1897 A.

Lepsius, G. R. 1881 A.

Murie, J. J. 1872 A.

Owen, R. 1845 B, p. 371, pl. xcvi.

1868 A, p. 284.

1875 A.

1875 B.

Parke, W. K. 1868 A, p. 218.

Thomas and Lydekker 1897 A, p. 596. (Trichechus.)

Trouessart, E. L. 1898 A, p. 1000.

Ward, H. L. 1887 A.

Woodward, H. 1885 D, p. 424.

Zittel, K. A. 1893 B, p. 195.

Trichechus antiquus (Leidy.)

Leidy, J. 1856 J, p. 165. (Manatus.)

Cope, E. D. 1890 F, p. 700. (M. fossilis.)

Leidy, J. 1860 B, p. 117, pl. xxiv, figs. 5-7. (Manatus.)

1869 A, p. 414. (Manatus.)

1877 A, p. 214. (Manatus.)

1889 E, p. 27. (Manatus.)

1892 A. (Manatus.)

Roger, O. 1896 A, p. 247. (Manatus.)

Trouessart, E. L. 1898 A, p. 1000. (Manatus.)

Pleistocene; South Carolina: Pliocene (Peace Creek); Florida.

Not improbably the same as *T. manatus*.

Trichechus inornatus (Leidy.)

Leidy, J. 1873 B, p. 336, pl. xxxvii, figs. 16, 17. (Manatus.)

Roger, O. 1896 A, p. 247. (Manatus.)

Trouessart, E. L. 1898 A, p. 1000. (Manatus.)

Tertiary (Phosphate beds); South Carolina.

Trichechus manatus Linn.

Linnaeus, C., 1758, Syst. Nat. ed., 10, i, p. 34.

Baikie, B. 1857 A. (M. latirostris.)

Baur, G. 1887 D, p. 840. (Manatus americanus.)

Giebel, C. G. 1847 A, p. 231. (Manatus americanus fossilis.)

Gray, J. E. 1857 A. (M. latirostris, M. americanus.)

Hartlaub, C. 1886 A. (M. latirostris.)

Lepsius, G. R. 1881 A. (Manatus americanus.)

Murie, J. 1872 A. (M. americanus.)

Owen, R. 1866 B, p. 432. (M. americanus.)

Parker, W. K. 1868 A, p. 218, pl. xxix, fig. 21. (M. americanus.)

Trouessart, E. L. 1898 A, p. 1000. (M. latirostris.)
Recent; and probably including many or all

of the undetermined bones of *Manatus* which have been found along the Eastern and Floridan coasts.

Trichechus sp. indet.

The remains referred to in the following citations belong to uncertain and probably indeterminate species. Most of them probably belong to *T. manatus*.

Allen, J. H. 1846 A, p. 41. (Manatus.)

Cope, E. D. 1867 C, p. 138. (Manatus.)

De Kay, J. C. 1842 C, p. 123. (M. giganteus.)

Gibbes, R. W. 1850 C, p. 67. (Manatus.)

Harlan, R. 1834 B, p. 73. (Manatus.)

1835 B, p. 278. (Manatus.)

1835 J, p. 385. (Manatus.)

Leidy, J. 1854 A, p. 10. (Manatus.)

1869 A, p. 414. (Manatus.)

Pictet, F. J. 1853 A, p. 372. (M. americanus fossilis.)

Smith, J. L. 1844 A. (Manatus.)

Pleistocene; New Jersey, Maryland, Virginia, North Carolina, South Carolina, Florida.

HYDRODAMALIDÆ.

Palmer, T. S. 1895 A, p. 450.

Brandt, J. F. 1849 A, p. 141. (Edentata seu Rhytinae.)

1868 A, p. 100 (Rhytinae); p. 344 (<Halicorida).

Cope, E. D. 1890 F, p. 701. (Rhytinaidæ.)

Flower, W. H. 1885 A, p. 221. (Rhytinaidæ.)

Flower and Lydekker 1891 A, p. 221. (Rhytinaidæ.)

Gadow, H. 1898 A, p. 45. (Halicoridæ, part.)

Gill, T. 1872 B, p. 14. (Rhytinaidæ.)

Haeckel, E. 1895 A, p. 566. (Rhytinaidæ.)

Lepsius, G. R. 1881 A. (Rhytinaidæ.)

Lydekker, R. 1887 A, p. 15. (Rhytinaidæ.)

Nicholson and Lydekker 1889 A, p. 1311. (Rhytinaidæ.)

Zittel, K. A. 1893 B, p. 195. (<Halicoridæ.)

HYDRODAMALIS Retzius.

Retzius, 1894, K. Vet. Acad. Handl. Stockholm, xv, p. 292.

Baer, K. E. 1840 A. (Rytina.)

Brandt, J. F. 1849 A. (Rytina.)

1862 A. (Rytina.)

1862 B. (Rytina.)

1862 C. (Rytina.)

1867 D. (Rytina.)

1868 A. (Rytina.)

Cope, E. D. 1890 F, p. 698. (Rytina.)

Flower and Lydekker 1891 A, p. 221. (Rytina.)

Gray, J. E. 1866 A, p. 365. (Rytina.)

Lepsius, G. R. 1881 A. (Rytina.)

Lydekker, R. 1887 A, p. 15. (Rytina.)

Nordmann, A. 1862 A. (Rytina.)

Owen, R. 1845 B, p. 316. (Rytina.)

1875 A. (Rytina.)

1875 B. (Rytina.)

Palmer, T. S. 1895 A.

Weyhe, — 1875 A, p. 100. (Rytina.)

Woodward, H. 1885 D, p. 415. (Rytina.)

Zittel, K. A. 1893 B, p. 206. (Rytina.)

Hydrodamalis gigas (Zimm.).

Zimmermann, 1780, Geogr. Geschichte, ii, p. 426, fig. 5. (Manati.) (Fide Trouessart.)

Brandt, J. F. 1849 A. (Rytina borealis.)

1866 A, p. 113. (R. borealis.)

1866 C. (R. borealis.)

1867 A. (R. borealis.)

Brandt, J. F. 1868 A, pls. i-ix. (R. borealis.)

Büchner, E. 1891 A, pl. i. (Rytina.)

Claudius, M. 1867 A. (R. stelleri.)

Cope, E. D. 1890 F, p. 701. (R. gigas.)

Evermann, B. W. 1893 A. (R. gigas.)

Flower, W. H. 1876 B, xiii, p. 411.

1885 A, p. 231. (R. stelleri.)

Flower and Lydekker 1891 A, p. 222. (R. stelleri.)

Gray, J. E. 1866 A, p. 365. (R. gigas.)

Hutchinson, H. N. 1893 A, p. 246, pl. xxvi. (R. gigas.)

Lydekker, R. 1887 A, p. 15, fig. 5. (R. gigas.)

Murie, J. 1872 B. (Rytina.)

Nicholson and Lydekker 1889 A, p. 1311. (R. gigas.)

Nordmann, A. 1862 A. (Rytina stelleri.)

Palmer, T. S. 1895 A.

Roger, O. 1896 A, p. 249. (Rytina.)

Stejneger, L. 1883 A. (R. gigas.)

1884 A. (R. gigas.)

1886 A, p. 317. ("Sea-cow.")

1887 A. (R. gigas.)

1893 A. (R. gigas.)

Steller, G. W. 1751 A. ("Manatus.")

Trouessart, E. L. 1898 A, p. 1008. (Rytina.)

Woodward, H. 1885 A. (R. stelleri.)

1885 D, p. 417, fig. 2. (R. gigas.)

Zigno, A de 1887 A. (R. borealis.)

Zittel, K. A. 1893 B, p. 200. (R. stelleri.)

Recently extinct; Commander Islands.

Order CETE Linn.

Linnæus, *C.*, 1758, *Syst. Nat.*, ed. 10, i, p. 75.

Unless otherwise indicated, the following authors use the term Cetacea for this order.

Albrecht, P. 1886 A.

Allen, J. A. 1881 A. (Cete.)

Brandt, J. F. 1873 A.

Cope, E. D. 1867 C, p. 144.

1880 B, p. 456.

1887 S, p. 342.

1889 C, p. 207.

1890 E.

1891 N, p. 69.

Duvernoy, G. L. 1851 A.

Flower, W. H. 1864 A.

1867 A.

1876 B, xiii, p. 449.

1883 A.

1883 D, p. 391.

1885 A.

Flower and Lydekker 1891 A, p. 225.

Gadow, H. 1898 A, p. 44.

Gegenbaur, C. 1898 A.

Gill, T. 1871 B.

1872 B, pp. 14, 49, 92. (Cete.)

1873 C.

Gill and Coues 1877 A, p. 1043.

Gray, J. E. 1886 A, p. 61.

Gruber, W. 1859 A.

Haeckel, E. 1895 A, p. 562. (Cetomorpha, part.)

Hay, O. P. 1899 F, p. 682.

Howes, G. B. 1888 A, p. 506.

Huxley, T. H. 1870 A.

1872 A, p. 333.

Jaekel, O. 1891 D, p. 198.

Küthenthal, W. 1888 A.

1889 A.

1890 A.

1890 B.

1890 C.

1891 C.

1893 B.

1893 C.

1895 A.

Leboucq, H. 1887 A.

1888 A.

Leboucq, H. 1896 A.

Leche, W. 1895 A, p. 119.

Leidy, J. 1871 C, p. 365.

Lydekker, R. 1896 B.

Marsh, O. C. 1877 E.

Murie, J. 1865 A.

Nicholson and Lydekker 1889 A, p. 1300.

Osborn, H. F. 1888 F, p. 1067.

1893 D.

Owen, R. 1843 A, p. 72.

1845 B, pp. 311, 345.

1851 C, p. 739.

1866 B, p. 415.

1868 A, p. 276.

Paquier, V. 1894 A, p. 18.

Parker, W. K. 1868 A, p. 217.

Roger, O. 1896 A, p. 75.

Ryder, J. A. 1885 D.

Schlosser, M. 1889 A.

1890 A.

1890 C.

Schmidt, O. 1886 A, p. 246.

Slade, D. D. 1888 A, p. 244.

Steinmann and Döderlein 1890 A, p. 705.

Struthers, J. 1871 A.

1872 A.

1881 A.

1888 A.

1893 A.

1895 A.

Thomas, O. 1892 B.

Tomes, C. S. 1898 A, p. 375.

Trouessart, E. L. 1898 A, p. 1009.

Van Beneden, P. J. 1868 A. ("Cétacés.")

1880 A.

1882 A.

Van Beneden and Gervais 1880 A. ("Cétacés.")

Weber, M. 1886 A.

1887 A.

1888 A.

Weyhe, — 1875 A, p. 99.

Woodward, A. S. 1898 B, p. 269.

Wortman, J. L. 1886 A, p. 413.

Zittel, K. A. 1893 B, pp. 155, 183, 745.

Suborder ZEUGLODONTES.

Ameghino, F. 1896 A, pp. 393, 409. (Zeuglodontes.)

Brandt, J. F. 1873 A, p. 291. (Zeuglodontina.)

Cope, E. D. 1889 R, p. 876. (Archæoceti.)

1890 E, p. 601. (Archæoceti.)

1898 B, p. 108. (Archæoceti.)

Dames, W. 1894 B. (Archæoceti.)

Flower, W. H. 1883 A. (Archæoceti.)

1883 D, p. 395. (Archæoceti.)

Flower and Lydekker 1891 A, p. 246. (Archæoceti.)

Gadow, H. 1898 A, p. 44. (Archæoceti.)

Gill, T. 1871 A. (Zeuglodontes.)

1871 B. (Zeuglodontia.)

1872 A, p. 301. (Zeuglodontia.)

1872 B, p. v (<Zeuglodontia); p. 14 (<Zeuglodontes).

1873 C.

Haeckel, E. 1895 A, p. 566. (Archiceta.)

Huxley, T. H. 1872 A, p. 349. (<Phocodontia.)

Lydekker, R. 1887 A, p. 49. (Archæoceti.)

Müller, J. 1847 E, p. 199. ("Zeuglodonten.")

1849 A. ("Zeuglodonten.")

1851 A. ("Zeuglodonten.")

Nicholson and Lydekker 1889 A, p. 1304. (Archæoceti.)

Pictet, F. J. 1853 A, p. 375. ("Zeuglodontes.")

Roger, O. 1896 A, p. 75. (Archæoceti.)

Thompson, D'A. W. 1890 A.

Trouessart, E. L. 1898 A, p. 1009. (Zeuglodontia.)

Weber, M. 1886 A, p. 235.

Woodward, A. S. 1898 B, p. 270. (Archæoceti.)

Zittel, K. A. 1893 B, p. 167.

BASILOSAURIDÆ.

Unless otherwise indicated, the following authors use the family name Zeuglodontidæ.

- Brandt J. F. 1868 A, p. 351.
 1873 A, pp. 11, 291.
 1874 A, p. 28.
 Burmeister, H. 1879 B, p. 530.
 Cope, E. D. 1868 I, p. 184. (Basilosauridæ.)
 1890 E, p. 601 (Zeuglodontidæ); p. 614 (Basilosauridæ).
 Flower and Lydekker 1891 A, p. 246.
 Gill, T. 1871 B, p. 122. (Basilosauridæ.)
 1872 A, p. 301. (Basilosauridæ.)

- Gill, T. 1873 C. (Basilosauridæ.)
 Huxley, T. H. 1870 A.
 Lydekker, R. 1887 A, p. 49.
 1893 C.
 Natural Science 1894 A.
 Nicholson and Lydekker 1889 A, pp. 1301, 1304.
 Owen, R. 1865 B.
 Steinmann and Döderlein 1890 A, p. 706.
 Trouessart, E. L. 1898 A, p. 1009.
 Van Beneden, P. J. 1865 A, p. 65.
 Zittel, K. A. 1893 B, p. 167.

BASILOSAURUS Harlan. Type *Zeuglodon cetoides* Owen.

- Harlan, R. 1834 C.
 Bartlett, J. 1846 A. (Zeuglodon.)
 Blainville, H. M. D. 1864 A, iii, U, p. 134.
 Brandt, J. F. 1873 A, p. 295. (Zeuglodon.)
 1874 A, pp. 28, 47. (Zeuglodon.)
 Bronn, H. G. 1838 A, p. 1070.
 Buckley, S. B. 1843 A. (Zygodon.)
 1846 A. (Basilosaurus.)
 Burmeister, H. 1871 C. (Zeuglodon.)
 Carus, C. G. 1847 A. (Hydrarchus.)
 1849 A. (Zeuglodon.)
 Conrad, T. A. 1840 A.
 Cope, E. D. 1867 C, p. 155.
 1889 C, p. 207.
 Dames, W. 1883 B, p. 132. (Zeuglodon.)
 1894 A, p. 219. (Zeuglodon.)
 1894 B. (Zeuglodon.)
 Dana, J. D. 1875 A. (Zeuglodon.)
 1896 A, p. 931. (Zeuglodon.)
 Delfortrie, E. 1874 A. (Zeuglodon.)
 Emmons, E. 1845 A.
 1845 B.
 1846 A.
 Flower, W. H. 1876 B, xiii, p. 450. (Zeuglodon.)
 1883 A. (Zeuglodon.)
 1883 D, p. 395. (Zeuglodon.)
 Flower and Lydekker 1891 A, p. 246. (Zeuglodon.)
 Gaudry, A. 1878 B, p. 39.
 Geinitz, B. 1847 A.
 Gibbes, R. W. 1847 B.
 Giebel, C. G. 1847 C, p. 717. (Hydrarchos.)
 Hammerschmidt, C. E. 1848 A.
 Harlan, R. 1834 B, p. 77.
 1834 C, p. 397.
 1834 E.
 1835 B, p. 282.
 1835 D.
 1835 F.
 1839 A, p. 23.
 Huxley, T. H. 1870 A. (Zeuglodon.)
 1870 B, p. xlviii. (Zeuglodon.)
 1872 A, p. 349. (Zeuglodon.)
 Jaekel, O. 1891 D, p. 198. (Zeuglodon.)
 Koch, A. 1845 A. (Hydrarchos, or Hydrargos.)
 1851 A. (Zeuglodon.)
 1851 B. (Zeuglodon.)
 1857 B. (Zeuglodon.)
 Leidy, J. 1869 A, p. 427.
 Lister, G. 1846 A. (Zeuglodon.)
 Lucas, F. A. 1895 A. (Zeuglodon.)
 1900 C, p. 810.
 Lydekker, R. 1887 A, p. 49. (Zeuglodon.)
 1893 C, p. 558. (Zeuglodon.)
 Marsh, O. C. 1877 E, p. 372.
 Meyer, H. 1847 A.
 Molin, R. 1859 A, p. 125. (Zeuglodon.)
 Müller, J. 1847 A. (Basilosaurus.)
 1847 B. (Zeuglodon.)
 1847 C. (Zeuglodon.)
 1847 E. (Zeuglodon.)
 1849 A. (Zeuglodon.)
 1851 A. (Zeuglodon.)
 Natural Science 1894 A. (Zeuglodon.)
 Nicholson and Lydekker 1889 A, p. 1304.
 Osborn, H. F. 1893 D. (Zeuglodon.)
 Owen, R. 1839 B, p. 24. (Zeuglodon; to replace Basilosaurus of Harlan.)
 1841 C. (Zeuglodon.)
 1845 B, p. 360. (Zeuglodon.)
 1865 B. (Zeuglodon.)
 Probst, J. 1886 A, p. 137. (Zeuglodon.)
 Rogers, H. D. 1845 A. (Zeuglodon.)
 Schlosser, M. 1890 A, p. 87. (Zeuglodon.)
 Thompson, D'A. W. 1890 A.
 Trouessart, E. L. 1898 A, p. 1009. (Zeuglodon.)
 Van Beneden, P. J. 1861 A. (Zeuglodon.)
 1865 A, p. 65. (Zeuglodon.)
 Warren, J. C. 1854 D. (Zeuglodon.)
 Weber, M. 1886 A, p. 233. (Zeuglodon.)
 Woodward, A. S. 1898 B, p. 270.
 Wyman J. 1850 E. (Zeuglodon.)
 Zittel, K. A. 1893 B, p. 167.
- Basilosaurus brachyspondylus**
 (Müller).
Müller, J. 1847 B, p. 388. (Zeuglodon.)
 Brandt, J. F. 1874 A, p. 47. (Zeuglodon.)
 Cope, E. D. 1867 C, p. 155. (Doryodon.)
 1890 E, p. 602. (Zeuglodon.)
 Dames, W. 1883 B, p. 132. (Zeuglodon.)
 1894 B. (Zeuglodon.)
 Dana, J. D. 1875 A, p. 342. (Zeuglodon.)
 Koch, A. 1845 A, p. 676. ("Zygodon," in part.)
 1851 B, pl. vii. (Zeuglodon.)
 Eocene; Alabama.

Basilosaurus cetoides (Owen).

- Owen, R. 1841 C, p. 69, pls. vii-ix. (Zeuglodon.)
 Agassiz L. 1848 A, p. 4. (Zeuglodon.)
 Bouvé, T. T. 1859 A, p. 49. ("Zeuglodon.")
 Buckley, S. B. 1843 A, p. 409. ("Zygodon.")
 1846 A, p. 125. (Zeuglodon.)
 Carus, C. G. 1847 A. (Hydrarchus harlani, in part.)
 1849 A, p. 385, pl. xxxix A, fig. 4. (Zeuglodon.)
 Cope, E. D. 1867 C, p. 155.
 1868 I, p. 185. (Polyptychodon interruptus Emmons a synonym?.)
 1890 E, p. 602 (Zeuglodon; p. 614 (Basilosaurus).)
 Dames W. 1883 B, p. 135, (Z. cetoides.)
 1894 B. (Z. macrospondylus.)
 Dana, J. D. 1875 A, p. 342. (Z. macrospondylus.)
 1875 B. ("Hydrarchus harlani.")
 1896 A, p. 908, fig. 1532. (Zeuglodon.)
 De Kay, J. E. 1842 C, p. 123. (Z. harlani.)
 Emmons, E. 1845 A, figures. (Zeuglodon.)
 1845 B. (Zeuglodon.)
 1846 A, pls. i, ii. (Zeuglodon.)
 1851 A. (Zeuglodon.)
 1858 B, p. 201, fig. 25. (Zeuglodon.)
 Geinitz, H. B. 1847 A. ("Hydrarchus harlani.")
 1847, in Carus, C. G. 1847 A, p. 1.
 Gervais, P. 1874 B, p. 58, pl. xix, figs. 6, 7. (Zeuglodon.)
 Gibbes, R. W. 1847 B, pl. i, figs. 1-4, 8.
 1850 A.
 Giebel, C. G. 1847 D.
 Hammerschmidt, C. E. 1848 A. (B. kockii, B. harlani.)
 Harlan, R. 1834 B, p. 77. ("Basilosaurus.")
 1834 C, p. 397, pl. xx, figs. 1, 2. ("Basilosaurus.")
 1835 D, p. 337. ("Basilosaurus.")
 1835 F, p. 349, pls. xxvi-xxviii. (Basilosaurus.)
 1839 A, p. 23. ("Basilosaurus.")
 1839 B. ("Basilosaurus.")
 1839 C. ("Basilosaurus.")
 1840 A, p. 67. ("Basilosaurus.")

- Koch, A. 1845 A. (Zeuglodon macrospondylus, Hydrarchus harlani.)
 1845 B, p. 676. ("Zygodon," in part.)
 1851 A. (Zeuglodon macrospondylus.)
 1857 A. ("Zeuglodon.")
 1857 B. (Zeuglodon macrospondylus.)
 Leidy, J. 1869 A, p. 427.
 1889 B, p. 95. (Zeuglodon.)
 Lucas, F. A. 1895 B, p. 745. (Zeuglodon.)
 1900 C, p. 809. (Basilosaurus.)
 1900 E, p. 327, pls. v-vii. (Basilosaurus.)
 Lydekker, R. 1887 A, p. 50. (Zeuglodon.)
 Lyell, C. 1846 C, p. 409. ("Zeuglodon.")
 Müller, J. 1847 A, p. 421. (Zeuglodon.)
 1847 B. (Zeuglodon macrospondylus.)
 1847 C. (Zeuglodon.)
 1847 D. (Zeuglodon.)
 1847 E, p. 193. (Zeuglodon macrospondylus.)
 1849 A, plates. (Zeuglodon macrospondylus.)
 1851 A. (Zeuglodon macrospondylus.)
 Owen, R. 1839 B, p. 24. ("Zeuglodon.")
 1845 B, p. 360, pl. xci. (Zeuglodon.)
 1860 E, p. 345, figs. 108, 109. (Zeuglodon.)
 Pictet, F. J. 1853 A, p. 378. (Zeuglodon macrospondylus, hydrarchus, trachyspondylus.)
 Quenstedt, F. A. 1852 A, p. 73. (Zeuglodon.)
 1885 A, p. 1f2. (Zeuglodon.)
 Roger, O. 1896 A, p. 75. (Zeuglodon.)
 Schuchert, C. 1900 A, p. 328.
 Trouessart, E. L. 1898 A, p. 1009. (Zeuglodon.)
 Tuomey, M. 1847 A, p. 283, figures. ("Zeuglodon.")
 1847 B, p. 151. ("Zeuglodon.")
 1847 C. ("Zeuglodon.")
 Wailes, B. L. C. 1854 A, p. 277. (Zeuglodon harlani.)
 Wyman, J. 1845 A. (Hydrarchos sillmani.)
 Zittel, K. A. 1893 B, p. 168, figs. 131, 132. (Zeuglodon.)
 Eocene; Alabama, Mississippi, Louisiana, Arkansas, Florida, North Carolina.
 For identification of the figures of Müller's plates (Müller J. 1849 A.), see Leidy, J. 1869 A, p. 430. Additional synonymy may also be found there.

DORUDON Gibbes. Type *D. serratus* Gibbes.

- Gibbes, R. W. 1845 A.
 Agassiz, L. 1848 A.
 Cope, E. D. 1867 C, p. 154. (Doryodon.)
 1890 E, p. 602. (Doryodon.)
 Gibbes, R. W. 1848 A.
 Leidy, J. 1852 C. (Pontogeneus, type *P. priscus*.)
 1869 A, p. 427.
 Lucas, F. A. 1900 C, p. 810.
 Müller, J. 1849 A, p. 1. (Syn. of Zeuglodon)
 1851 A. (Syn. of Zeuglodon.)
 Owen, R. 1846 C.
 1846 D.
 Zittel, K. A. 1893 B, p. 168.

Dorudon serratus Gibbes.

- Gibbes, R. W. 1845 A, p. 254, pl. i.
 Agassiz, L. 1848 A, p. 254.

- Amer. Jour. Science 1845 A, p. 218. ("Zeuglodon.")
 Carus, C. G. 1847 A. (Hydrarchus harlani.)
 1849 A, p. 369, pl. xxxix A, figs. 1-3; pl. xxxix B. (Zeuglodon hydrarchos.)
 Cope, E. D. 1867 C, p. 155. (Doryodon.)
 1868 I, p. 186. (Pontogeneus priscus; "Delphinoid.")
 1869 G, p. 6. (Pontogeneus priscus.)
 1890 E, p. 614. (Doryodon serratus.)
 Dames, W. 1894 B.
 Gibbes, R. W. 1845 A.
 1847 B, p. 5, pl. ii, figs. 1-8; pl. iii, figs. 4-6. (Basilosaurus cetoides, in part.)
 1848 A, p. 57.
 Koch, A. 1845 B, p. 676. ("Zygodon," in part.)
 1851 B, pl. vii: (Zeuglodon brachyspondylus.)

- Leidy, J. 1852 C, p. 52. (Pontogeneus.)
 1869 A, p. 428, pl. xxix, figs. 2-5.
 Lydekker, R. 1887 A, p. 50. (Zeuglodon hydrarchus; syn.? of *Z. cetoides*.)
 1892 B, p. 559. (*Z. hydrarchus*.)
 Müller, J. 1847 C, p. 103. (*D. serratus*, syn. of *Zeuglodon cetoides*.)
 1847 E, p. 193. (*Zeuglodon brachyspondylus*.)
 1849 A, pl. i, fig. 1 (in part); pls. iii, iv; pl. v, fig. 1; pl. viii, figs. 3, 9, 10; pl. xii, fig. 11; pl. xiii, figs. 1, 2, 6, 7; pl. xviii; pl. xix,

- Müller, J.—Continued.
 figs. 1-5; pls. xx, xxi; pl. xxiii, fig. 4; pl. xxvi; pl. xxvii, figs. 1, 2, 6 (*Zeuglodon brachyspondylus*.)
 1851 A. (*Zeuglodon brachyspondylus*.)
 Reichenbach, H. G. L., in Carus, C. G. 1847 A, p. 13. (*Basilosaurus kochii*.)
 Trouessart, E. L. 1898 A, p. 1010. (*Zeuglodon*.)
 Eocene; Alabama, South Carolina, Louisiana.
 It is possible that *Dorudon serratus* and *Zeuglodon brachyspondylus* are distinct species.

PONTOBASILEUS Leidy. Type *P. tuberculatus* Leidy.

- Leidy, J.* 1873 B, p. 337,
 Trouessart, E. L. 1898 A, p. 1010.
 Zittel, K. A. 1893 B, p. 167. (Syn. of *Zeuglodon*.)

Pontobasileus tuberculatus Leidy.

- Leidy, J.* 1873 B, p. 337, pl. xxxvii, fig. 15.
 Trouessart, E. L. 1898 A, p. 1010.
 Tertiary; Alabama?

SAUROCETUS Agassiz. Type *S. gibbesii* Agassiz.

- Agassiz, L.* 1848 A.
 Burmeister, H. 1871 C.
 Cope, E. D. 1890 E, p. 615.
 Leidy, J. 1869 A, p. 431.
 Trouessart, E. L. 1898 A, p. 1010. (Syn. of *Zeuglodon*.)

- Zittel, K. A. 1893 B, p. 171.
 A genus of uncertain position.

Saurocetus gibbesii Agassiz.

- Agassiz, L.* 1848 A.
 Eocene; South Carolina.
 For additional references see under the genus.

Suborder ODONTOCETE Flower.

- Brandt, J. F. 1873 A, p. 202. (Odontocetoidea.)
 Cope, E. D. 1889 R, p. 876. (Odontoceti.)
 1890 E, p. 602. (Odontoceti.)
 1898 B, p. 109. (Odontoceti.)
 Dames, W. 1894 B, p. 36. (Odontoceti.)
 Flower, W. H. 1864 A, p. 388. (Delphinoidea, or Odontocete.)
 1867 A, p. 111. (Delphinoidea, or Odontocete.)
 1868 A. (Physeter.)
 1871 A. (Odontoceti.)
 1876 B, xlii, p. 450. (Odontoceti.)
 1883 D, p. 395. (Odontoceti.)
 1885 A.
 Flower and Lydekker 1891 A, p. 247. (Odontoceti.)
 Gadow, H. 1898 A, p. 44. (Odontoceti.)

- Gill, T. 1871 B, p. 122. (Denticete.)
 1872 B, pp. 14, 93. (Denticete.)
 1873 C, p. 26. (Denticetes.)
 Gray, J. E. 1866 A, pp. 62, 194. (Denticete.)
 Haeckel, E. 1895 A, p. 566. (Denticeta, part.)
 Howes, G. B. 1888 A, p. 507. (Odontoceti.)
 Huxley, T. H. 1872 A, p. 340. (Delphinoidea.)
 Lydekker, R. 1887 A, p. 53. (Odontoceti.)
 Nicholson and Lydekker 1889 A, p. 1305. (Odontoceti.)
 Roger, O. 1896 A, p. 76. (Odontoceti.)
 Schlosser M. 1890 C, p. 241.
 Van Beneden and Gervais 1880 A, p. 293. ("Cétodontes.")
 Woodward, A. S. 1898 B, p. 271.
 Zittel, K. A. 1893 B, p. 168. (Odontoceti.)

SQUALODONTIDÆ.

- Cope, E. D. 1867 C, p. 144. (Cynorcidæ.)
 1889 R, p. 876.
 1890 E, p. 602.
 1895 A, p. 139.
 Dames, W. 1894 B, p. 36. (Squalodontidæ, Mesoceti.)
 Flower, W. H. 1883 D, p. 397.
 Flower and Lydekker 1891 A, p. 257.

- Gill, T. 1872 B, p. 14. (Cynorcidæ.)
 Lydekker, R. 1887 A, p. 75.
 Nicholson and Lydekker 1889 A, p. 1306.
 Owen, R. 1865 B.
 Roger, O. 1896 A, p. 76.
 Steinmann and Döderlein 1890 A, p. 706.
 Van Beneden, P. J. 1865 A. ("Squalodons.")
 Zittel, K. A. 1893 B, p. 169.

SQUALODON Grateloup. Type *Delphinoides grateloupii* Pedroni.

- Grateloup, J. P. S.* 1840 A, p. 208.
Agassiz, L. 1841 A. (Phocodon, type *P. scillæ*.)
Ameghino, F. 1896 A, p. 510.
Brandt, J. F. 1873 A, pp. 299, 315.
 1874 A, p. 28.

- Cope, E. D. 1867 C, p. 150 (Squalodon; Cynorca, type *C. proterva*); p. 151 Colophonodon).
 1868 I, p. 185. (Cynorca.)
 Dames, W. 1894 B, p. 19.
 Depéret, C. 1887 A, p. 278.

Flower and Lydekker 1891 A, p. 257.

Gervais, P. 1859 A, p. 309.

1862 A.

1876 A. (Phocodon.)

Gaudry, A. 1878 B, p. 30.

Gibbes, R. W. 1847 B.

Jourdan, — 1861 A, p. 370 (Rhizoprion, type *R. bariensis*); p. 371 (Squalodon).

Leidy, J. 1853 C, p. 377. (Colophonodon, type *C. holmesii*.)

1856 K, p. 220. (Macrophoca, type *M. atlantica*.)

1869 A, p. 416.

Longhi, P. 1899 A, p. 374.

Lydekker, R. 1887 A, p. 75.

Meyer, H. 1840 A.

1841 A.

1847 A. (Squalodon, Pachyodon.)

Molin, R. 1859 A, p. 125. (Squalodon, Pachyodon.)

Müller, J. 1847 C. (Squalodon, syn. of Zeuglodon.)

1849 A, p. 29.

Nicholson and Lydekker 1889 A, p. 1306.

Osborn, H. F. 1893 D, p. 14.

Owen, R. 1845 B, p. 564. (Phocodon.)

1865 B.

1866 B, p. 405. (Squalodon, Phocodon.)

Paquier, V. 1894 A.

Pictet, F. J. 1853 A, p. 379.

Probst, J. 1885 A.

1886 A, p. 105.

Quenstedt, F. A. 1885 A, p. 113.

Roger, O. 1896 A, p. 76.

Steinmann and Döderlein 1890 A, p. 706.

Trouessart, E. L. 1898 A, p. 1011.

Van Beneden, P. J. 1861 A.

1865 A, p. 64.

Van Beneden and Gervais 1880 A, pp. 426, 519 (Squalodon); p. 451 (Phocodon).

Weber, M. 1886 A, p. 233.

Woodward, A. S. 1898 B, p. 272.

Zittel, K. A. 1893 B, p. 170.

Squalodon atlanticus Leidy.

Leidy, J. 1856 K, p. 220. (Macrophoca.)

Cope, E. D. 1867 B, p. 132.

1867 C, p. 151. (Colophonodon.)

1869 N, p. 739.

1875 H, p. 363.

1890 E, p. 603.

Leidy, J. 1869 A, p. 416, pl. xxviii, figs. 4-7; pl. xxx, fig. 18.

Lydekker, R. 1887 A, p. 77.

Roger, O. 1896 A, p. 77.

Van Beneden and Gervais 1880 A, p. 440.

Miocene; New Jersey, Maryland.

Squalodon debilis (Leidy).

Leidy, J. 1856 N, p. 265. (Phoca.)

Allen, J. A. 1880 A, p. 473. (Squalodon?)

Cope, E. D. 1867 C, p. 144.

Leidy, J. 1869 A, p. 415, pl. xxviii, figs. 12, 13. (Phoca.)

Roger, O. 1896 A, p. 74. (Phoca.)

Trouessart, E. L. 1898 A, p. 1014.

Zittel, K. A. 1893 B, p. 684. (Phoca.)

Eocene; South Carolina.

Squalodon holmesii Leidy.

Leidy, J. 1853 C, p. 377. (Colophonodon.)

Cope, E. D. 1867 C, pp. 144, 153.

1890 E, p. 603.

Leidy, J. 1869 A, p. 418, pl. xxviii, figs. 15-17; pl. xxix, fig. 9.

Roger, O. 1896 A, p. 77.

Trouessart, E. L. 1898 A, p. 1015.

Eocene; South Carolina.

Squalodon? modestus (Leidy).

Leidy, J. 1869 A, p. 415, pl. xxviii, fig. 14. (Phoca.)

Allen, J. A. 1880 A, p. 474. ("Squalodont.")

Roger, O. 1896 A, p. 74. (Phoca.)

Zittel, K. A. 1893 B, p. 684. (Phoca.)

Eocene; South Carolina.

Squalodon pelagius Leidy.

Leidy, J. 1869 A, p. 420, pl. xxix, fig. 1.

Cope, E. D. 1890 E, p. 615.

Roger, O. 1896 A, p. 77.

Trouessart, E. L. 1898 A, p. 1015.

Eocene; South Carolina.

Squalodon protervus Cope.

Cope, E. D. 1867 C, pp. 144, 152 (Cynorca); p. 151, in part (Squalodon).

1868 I, p. 185. (Cynorca.)

1890 E, p. 615.

Leidy, J. 1869 A, pp. 384, 423, pl. xxviii, figs. 18, 19.

Roger, O. 1896 A, p. 77.

Trouessart, E. L. 1898 A, p. 1015.

Eocene; South Carolina.

The original description refers almost wholly to a canine tooth of *Dicotyles*.

Squalodon tiedemani Allen.

Allen, J. A. 1887 A, pls. v, vi,

Trouessart, E. L. 1898 A, p. 1015. (S. tiedemani.)

Eocene; South Carolina.

AGOROPHIUS Cope. Type *Zeuglodon pygmaeus* Müller.

Cope, E. D. 1895 A, p. 139.

1896 J, p. 141.

Trouessart, E. L. 1898 A, p. 1069.

Agorophius pygmaeus (Müller).

Müller, J. 1849 A, p. 29, pl. xxxiii, figs. 1, 2. (Zeuglodon.)

Agassiz, L., in Leidy, J. 1869 A, p. 420. (Phocodon holmesii.)

Cope, E. D. 1867 C, p. 155. (Doryodon.)

1868 I, p. 186. (Zeuglodon.)

Cope, E. D. 1890 E, p. 615. (Squalodon pygmaeus *errone.*)

1895 A, p. 139.

Dames, W. 1894 B. (Zeuglodon.)

Gervais, P. 1871 A, p. 138. (Squalodon.)

Gibbes, R. W. 1847 B, p. 8. ("Zeuglodon.")

Holmes, F. S. 1849 A, p. 197. ("Zeuglodon," "Basilosaurus.")

Leidy, J. 1854 A, p. 8. (Basilosaurus.)

1869 A, p. 420, pl. xxix, figs. 7, 8. (Squalodon.)

Lydekker, R. 1892 B, p. 559. (Doryodon.)

Müller, J. 1851 A, p. 242.
 Roger, O. 1896 A, p. 77. (Squalodon.)
 Trouessart, E. L. 1898 A, p. 1014 (Squalodon); p. 1069 (Agorophius).
 Tuomey, M. 1847 A. ("Zeuglodon.")
 1847 B. ("Zeuglodon.")
 1847 C. ("Zeuglodon.")

Tuomey, M. 1848, Rept. Geol. S. C., p. 166. ("Zeuglodon.")
 1849, Rept. Geol. S. C., p. 69. ("Zeuglodon.")
 Van Beneden and Gervais 1880 A, p. 441. (Squalodon.)
 Eocene; South Carolina.

GRAPHIODON Leidy. Type *G. vinearius* Leidy.

Leidy, J. 1870 R, p. 122.
 1873 B, p. 337.
 Trouessart, E. L. 1898 A, p. 1011. (Syn. of Squalodon?)

Graphiodon vinearius Leidy.

Leidy, J. 1870 R, p. 122.

Cope, E. D. 1890 E, p. 615. (Squalodon.)
 Leidy, J. 1873 B, p. 337, pl. xxii, fig. 7.
 Roger, O. 1896 A, p. 77. (Squalodon.)
 Trouessart, E. L. 1898 A, p. 1015. (Squalodon?).
 Miocene; Massachusetts.

CETERHINOPS Leidy. Type *C. longifrons* Leidy.

Leidy, J. 1877 A, p. 230.
 A genus of uncertain position.

Ceterhinops longifrons Leidy.

Leidy, J. 1877 A, p. 230, pl. xxxiv, fig. 7.
 Tertiary (Phosphate beds); South Carolina.

PLATANISTIDÆ.

Brandt, J. F. 1874 A, p. 17. (Platanistinae.)
 Cope, E. D. 1869 G, p. 6.
 1890 E, p. 603.
 Flower, W. H. 1867 A, p. 113.
 1868 B, p. 349.
 Flower and Lydekker 1891 A, p. 257.
 Gill, T. 1871 B, p. 123. (Platanistidæ, Rhabdosteidæ.)
 1872 B, pp. 14, 95 (Platanistidæ); p. 15 (Rhabdosteidæ).

Huxley, T. H. 1872 A, p. 342.
 Lydekker, R. 1893 C, p. 564.
 Nicholson and Lydekker 1889 A, p. 1306.
 Owen, R. 1868 A, p. 282. (Platanista.)
 Paquier, V. 1894 A, p. 11.
 Roger, O. 1896 A, p. 77.
 Zittel, K. A. 1893 B, p. 171.

PLATANISTINÆ.

Brandt, J. F. 1874 A, p. 17.

| Flower, W. H. 1867 A, p. 114.

CHAMPSODELPHIS Gervais. Type *C. macrogenius* Gervais.

Gervais, P., 1852, Zool. Paléont. Franc., ed. 1, p. 152.
 Brandt, J. F. 1873 A, p. 263.
 1874 A, p. 19.
 Flower and Lydekker 1891 A, p. 259.
 Longhi, P. 1899 A, p. 323.
 Lydekker, R. 1887 A, p. 74.
 Nicholson and Lydekker 1889 A, p. 1306.
 Probst, J. 1886 A, pp. 106, 122.
 Van Beneden and Gervais 1880 A, p. 482.

Zittel, K. A. 1893 B, p. 171.

Champsodelphis acutidens (Cope).

Cope, E. D. 1867 C, p. 145. (Priscodelphinus.)
 Brandt, J. F. 1873 A, p. 286. (Priscodelphinus.)
 Leidy, J. 1869 A, p. 433. (Priscodelphinus.)
 Trouessart, E. L. 1898 A, p. 1020.
 Van Beneden and Gervais 1880 A, p. 508.
 Miocene; Maryland.

LOPHOCETUS Cope. Type *Delphinus calvertensis* Harlan.

Cope, E. D. 1867 C, p. 146.
 1869 G, p. 6.
 1890 E, p. 606.
 Zittel, K. A. 1893 B, p. 173.
 A genus of uncertain position.
Lophocetus calvertensis (Harlan).
 Harlan, R. 1842 D, p. 195, 3 plates. (Delphinus.)
 Brandt, J. F. 1873 A, p. 288.
 Cope, E. D. 1866 H, p. 297. (Pontoporia.)

Cope, E. D. 1867 C, p. 146.
 1890 E, pp. 606, 615.
 Leidy, J. 1869 A, p. 435.
 Roger, O. 1896 A, p. 79.
 Trouessart, E. L. 1898 A, p. 1022.
 Van Beneden and Gervais 1880 A, p. 512.
 Zittel, K. A. 1893 B, p. 173.
 Miocene; Maryland.

DELPHINODON Leidy. Type *Squalodon mento* Leidy.

- Leidy, J.* 1869 A, p. 424.
Cope, E. D. 1890 E, p. 615.
Leidy, J. 1869 A, p. 428. (Phocageneus, type *P. venustus* Leidy.)
Lydekker, R. 1887 A, p. 75. (Syn. of *Squalodon*.)
Trouessart, E. L. 1898 A, p. 1023.
Zittel, K. A. 1893 B, p. 170. (Syn. of *Squalodon*.)

Delphinodon mento Cope.

- Cope, E. D.* 1867 B, p. 132. (*Squalodon*.)
 1867 C, pp. 151, 152. (*Squalodon*.)
 1890 E, p. 615.
Leidy, J. 1869 A, p. 424, pl. xxx, figs. 7, 8, 9.
Roger, O. 1896 A, p. 79.
Trouessart, E. L. 1898 A, p. 1023.
Wyman, J. 1850 B, p. 230, figs. 5-7. ("Cetacean.")
 Miocene; Maryland, South Carolina.

Delphinodon venustus (Leidy).

- Leidy, J.* 1869 A, p. 426, pl. xxix, fig. 10. (Phocageneus.)
Agassiz, L. in Wyman J. 1850 B, p. 230, fig. 4. ("Phocodon.")
Cope, E. D. 1867 C, p. 152. (*Squalodon mento*, in part.)

PRISCODELPHINUS Leidy.

- Leidy, J.* 1851 G, p. 326.
Cope, E. D. 1868 I, pp. 186, 187 (*Priscodelphinus*); pp. 186, 190 (*Tretosphys*, type *T. gabbii*.)
 1869 G, p. 7. (*Tretosphys*.)
 1890 E, pp. 604, 615.
Leidy, J. 1869 A, p. 433 (*Priscodelphinus*); p. 434 (*Tretosphys*.)
Trouessart, E. L. 1898 A, p. 1023.
Van Beneden and Gervais 1880 A, pp. 493, 510.
Zittel, K. A. 1893 B, p. 172.

Priscodelphinus gabbii Cope.

- Cope, E. D.* 1868 I, p. 191. (*Delphinapterus*.)
Brandt, J. F. 1873 A, p. 287. (*Tretosphys*.)
Cope, E. D. 1869 G, pp. 6, 7, 8. (*Tretosphys*.)
 1890 E, p. 615.
Leidy, J. 1869 A, p. 434. (*Tretosphys*.)
Roger, O. 1896 A, p. 78.
Trouessart, E. L. 1898 A, p. 1024.
Van Beneden and Gervais 1880 A, p. 512. (*Tretosphys*.)
 Miocene; Maryland.

Priscodelphinus grandævus Leidy.

- Leidy, J.* 1851 G, p. 327. (*Priscodelphinus*.)
Brandt, J. F. 1873 A, p. 287. (*Tretosphys*.)
Cope, E. D. 1867 C, p. 144.
 1868 I, p. 191. (*Delphinapterus*.)
 1869 G, pp. 7, 9. (*Tretosphys*.)
 1890 E, p. 604, figs. 2, 3.
Leidy, J. 1853 C, p. 377.
 1854 A, p. 8.
 1869 A, p. 434. (*Tretosphys*.)
Roger, O. 1896 A, p. 78.
Trouessart, E. L. 1898 A, p. 1024.
Van Beneden and Gervais 1880 A, p. 511. (*Tretosphys*.)

- Cope, E. D.* 1890 E, p. 615.
Roger, O. 1896 A, p. 79.
Trouessart, E. L. 1898 A, p. 1023.
 Miocene; Virginia.

Delphinodon leidy nom. nov.

- Allen, J. A.* 1880 A, p. 473. (*D. wymani*.)
Cope, E. D. 1867 C, pp. 151, 152. (*Squalodon wymanii*, in part.)
 1890 E, p. 615. (*D. wymanii*.)
Leidy, J. 1856 N, p. 265. (*Phoca wymani*, in part.)
 1869 A, p. 425, pl. xxx, figs. 10-12. (*D. wymanii*.)
Roger, O. 1896 A, p. 79. (*D. wymanii*.)
Trouessart, E. L. 1898 A, p. 1023. (*D. wymanii*.)
Wyman, J. 1850 B, p. 229, in part? ("Seal.")
 Miocene; Maryland.

The name *Delphinodon leidy* is intended to replace *D. wymani* Leidy, which is the same, in part, as *Squalodon wymanii* Cope 1867 C, p. 152, but not same as *S. wymani* Cope 1867 B, p. 132. The type of *D. leidy* is Leidy, J. 1869 A, pl. xxx, fig. 12.

See references under *Phoca wymani*.

Type *P. harlani* Leidy.

- Zittel, K. A.* 1893 B, p. 173, fig. 134.
 Miocene; New Jersey.

Priscodelphinus harlani Leidy.

- Leidy, J.* 1851 G, p. 326.
Brandt, J. F. 1873 A, p. 286.
Cope, E. D. 1867 C, p. 144.
 1868 I, p. 188.
 1869 N, p. 739.
 1875 H, p. 363.
 1890 E, p. 615. (Syn. of *P. grandævus*.)
Harlan, R. 1825 B, p. 232. ("Plesiosaurus.")
 1834 B, p. 77. ("Plesiosaurus.")
 1835 B, p. 821. ("Plesiosaurus.")
Leidy, J. 1853 C, p. 377.
 1854 A, p. 8.
 1865 A, p. 1.
 1869 A, p. 433.
Roger, O. 1896 A, p. 78. (Syn. of *P. grandævus*.)
Trouessart, E. L. 1898 A, p. 1024.
 Miocene; New Jersey.

Priscodelphinus lacertosus Cope.

- Cope, E. D.* 1868 I, p. 189 (*Tretosphys*); p. 190 (*Delphinapterus lacertosus*, *D. hawkinsii*.)
 1868 I, p. 190. (*Delphinapterus*, *Tretosphys*.)
 1869 G, p. 7. (*Tretosphys*.)
 1869 N, p. 739. (*Delphinapterus lacertosus*, *D. hawkinsii*.)
 1875 H, p. 363.
 1890 E, p. 615.
Leidy, J. 1869 A, p. 434. (*Tretosphys*.)
Roger, O. 1896 A, p. 78.
Trouessart, E. L. 1898 A, p. 1024.
Van Beneden and Gervais 1880 A, p. 512.
 Miocene; Maryland.

Priscodelphinus ruschenbergi Cope.*Cope, E. D.* 1868 I, p. 189. (Delphinapterus.)

Brandt, J. F. 1873 A, p. 287. (Tretosphys.)

Cope, E. D. 1869 G, pp. 7, 9. (Tretosphys.)
1890 E, p. 615.

Leidy, J. 1869 A, p. 435. (Tretosphys.)

Roger, O. 1896 A, p. 78.

Trouessart, E. L. 1898 A, p. 1024.

Van Beneden and Gervais 1880 A, p. 512. (Tretosphys.)

Miocene; Maryland.

Priscodelphinus uræus Cope.*Cope, E. D.* 1869 G, pp. 7, 8. (Tretosphys.)

Brandt, J. F. 1873 A, p. 287. (Tretosphys.)

Cope, E. D. 1875 H, p. 363.
1890 E, p. 615.

Leidy, J. 1869 A, p. 435. (Tretosphys.)

Roger, O. 1896 A, p. 78.

Trouessart, E. L. 1898 A, p. 1024.

Van Beneden and Gervais 1880 A, p. 512.

Miocene; New Jersey, Maryland.

Zarhachis Cope. Type *Z. flagellator* Cope.*Cope, E. D.* 1868 I, pp. 186, 189.

1869 G, p. 9.

1890 E, p. 604.

Leidy, J. H. 1869 A, p. 435.

Trouessart, E. L. 1898 A, p. 1024.

Zittel, K. A. 1893 B, p. 172.

Zarhachis flagellator Cope.*Cope, E. D.* 1868 I, p. 189, in part.

Brandt, J. F. 1873 A, p. 287.

Cope, E. D. 1869 G, p. 9.

1890 E, p. 615.

Leidy, J. 1869 A, p. 435.

Roger, O. 1896 A, p. 78.

Trouessart, E. L. 1898 A, p. 1024.

Van Beneden and Gervais 1880 A, p. 512

Miocene; Maryland,

Zarhachis tysonii Cope.*Cope, E. D.* 1869 G, p. 9.

Brandt, J. F. 1873 A, p. 288.

Cope, E. D. 1868 I, p. 189. (*Z. flagellator*, in part.)
1890 E, p. 615.

Leidy, J. 1869 A, p. 435.

Roger, O. 1896 A, p. 78.

Trouessart, E. L. 1898 A, p. 1025.

Van Beneden and Gervais 1880 A, p. 512.

Miocene; Maryland.

Zarhachis velox Cope.*Cope, E. D.* 1869 G, pp. 9, 10.

Brandt, J. F. 1873 A, p. 288.

Cope, E. D. 1868 I, p. 189. (*Z. flagellator*, in part.)
1875 H, p. 363.

1890 E, p. 615.

Leidy, J. 1869 A, p. 615.

Roger, O. 1896 A, p. 78.

Trouessart, E. L. 1898 A, p. 1025.

Van Beneden and Gervais 1880 A, p. 512.

Miocene; Maryland.

Ixacanthus Cope. Type *I. caelospondylus* Cope.*Cope, E. D.* 1868 G, p. 159.

Brandt, J. F. 1873 A, p. 286.

Cope, E. D. 1868 I, p. 187.1875 H, p. 364. (*Belosphys*, type *B. spinosus*.)

1890 E, pp. 604, 615.

Leidy, J. 1869 A, p. 435.

Trouessart, E. L. 1898 A, p. 1025.

Zittel, K. A. 1893 B, p. 172.

Ixacanthus atropius Cope.*Cope, E. D.* 1868 I, p. 188. (Priscodelphinus.)

Brandt, J. F. 1873 A, p. 286. (Priscodelphinus.)

Cope, E. D. 1869 G, p. 6. (Priscodelphinus.)1875 H, p. 364. (*Belosphys*.)

1890 E, p. 615.

Leidy, J. 1869 A, p. 433. (Priscodelphinus.)

Roger, O. 1896 A, p. 78.

Trouessart, E. L. 1898 A, p. 1025.

Van Beneden and Gervais 1880 A, p. 511. (Priscodelphinus.)

Miocene; Maryland.

Ixacanthus caelospondylus Cope.*Cope, E. D.* 1868 G, p. 159.

Brandt, J. F. 1873 A, p. 288.

Cope, E. D. 1868 I, p. 187.

1869 N, p. 739.

1875 H, p. 364.

1890 E, p. 604.

Leidy, J. 1869 A, p. 435.

Trouessart, E. L. 1898 A, p. 1025.

Van Beneden and Gervais 1880 A, p. 513.

Miocene; Maryland, New Jersey?.

Ixacanthus conradi (Leidy).*Leidy, J.* 1852 B, p. 35. (Delphinus.)

Brandt, J. F. 1873 A, p. 286. (Priscodelphinus.)

Cope, E. D. 1868 I, p. 188. (Priscodelphinus.)1875 H, p. 364. (*Belosphys*.)

1890 E, p. 615.

Leidy, J. 1869 A, p. 433. (Priscodelphinus.)

Roger, O. 1896 A, p. 79.

Trouessart, E. L. 1898 A, p. 1025 (*I. caelospondylus*); p. 1032 (*Delphinus conradi*).

Van Beneden and Gervais 1880 A, p. 511. (Priscodelphinus.)

Miocene; Virginia, Maryland.

Ixacanthus spinosus Cope.*Cope, E. D.* 1868 I, p. 187. (Priscodelphinus.)

Brandt, J. F. 1873 A, p. 286. (Priscodelphinus.)

Cope, E. D. 1875 H, p. 364. (*Belosphys*.)

1890 E, p. 603, fig. 1; p. 615.

Leidy, J. 1869 A, p. 433. (Priscodelphinus.)

Roger, O. 1896 A, p. 78.

Trouessart, E. L. 1898 A, p. 1025.

Van Beneden and Gervais 1880 A, p. 511. (Priscodelphinus.)

Miocene; Maryland.

Ixacanthus stenus Cope.

- Cope, E. D.* 1868 I, p. 188. (Priscodelphinus.)
 Brandt, J. F. 1873 A, p. 286.
Cope, E. D. 1875 H, p. 364. (Belosphys.)
 1890 E, p. 615.

- Leidy, J. 1869 A, p. 433. (Priscodelphinus.)
 Roger, O. 1896 A, p. 79.
 Trouessart, E. L. 1898 A, p. 1025.
 Van Beneden and Gervais 1880 A, p. 511.
 Miocene; Maryland.

AGABELUS Cope. Type *A. porcatys* Cope.

- Cope, E. D.* 1875 H, p. 363.
 1890 E, pp. 604, 615.
 Flower and Lydekker 1891 A, p. 260.
 Trouessart, E. L. 1898 A, p. 1025.
 Zittel, K. A. 1893 B, p. 174.

Agabelus porcatys Cope.

- Cope, E. D.* 1875 H, p. 363.
 1890 E, pp. 604, 615.
 Roger, O. 1896 A, p. 79.
 Trouessart, E. L. 1898 A, p. 1025.
 Miocene; New Jersey.

RHABDOSTEUS Cope. Type *R. latiradix* Cope.

- Cope, E. D.* 1867 B, p. 132.
 Brandt, J. F. 1874 A, p. 13.
Cope, E. D. 1867 C, p. 145.
 1890 E, p. 604.
 Leidy, J. 1869 A, p. 435.
 Trouessart, E. L. 1898 A, p. 1025.
 Van Beneden and Gervais 1880 A, p. 513.
 Zittel, K. A. 1893 B, p. 174.

Rhabdosteus latiradix Cope.

- Cope, E. D.* 1867 B, p. 132.
 Brandt, J. F. 1873 A, p. 288.
Cope, E. D. 1867 C, p. 145.
 1890 E, pp. 605, 607, fig. 4; p. 615.
 Leidy, J. 1869 A, p. 435.
 Roger, O. 1896 A, p. 79.
 Trouessart, E. L. 1898 A, p. 1025.
 Miocene; Maryland.

CETOPHIS Cope. Type *C. heteroclitus* Cope.

- Cope, E. D.* 1868 I, p. 184.
 1890 E, p. 604.
 Trouessart, E. L. 1898 A, p. 1025.
 Zittel, K. A. 1893 B, p. 173.
 A genus of doubtful position.

Cetophis heteroclitus Cope.

- Cope, E. D.* 1868 I, p. 185.
 1890 E, pp. 603, 606.
 Leidy, J. 1869 A, p. 431.
 Roger, O. 1896 A, p. 79.
 Trouessart, E. L. 1898 A, p. 1025.
 Miocene; Maryland.

DELPHINIDÆ.

- Albrecht, P. 1886 A, p. 344.
 Brandt, J. F. 1873 A, p. 227.
Cope, E. D. 1868 I, p. 186.
 1889 C, p. 207.
 1890 E, p. 609.
 Cuvier, G. 1834 A, viii, pp. 75-170, pls. ccxxii, ccxxiv.
 Duvernoy, G. L. 1851 A. ("Dauphins.")
 Flower, W. H. 1867 A, p. 113.
 1868 B, p. 349.
 1883 B.
 1883 D, p. 398.
 1885 A, p. 349.
 Flower and Lydekker 1891 A, p. 260.

- Gill, T. 1871 B, p. 123.
 1872 B, pp. 14, 94.
 Gray, J. E. 1866 A, p. 228.
 Huxley, T. H. 1872 A, p. 342.
 Lydekker, R. 1887 A, p. 78.
 Nicholson and Lydekker 1889 A, p. 1307.
 Osborn, H. F. 1888 F, p. 1075.
 Owen, R. 1866 B, p. 424.
 Roger, O. 1896 A, p. 79.
 Trouessart, E. L. 1898 A, p. 1026.
 True, F. W. 1889 A.
 Weyhe, — 1875 A, p. 100.
 Zittel, K. A. 1893 B, p. 174.

DELPHININÆ.

- Brandt, J. F. 1873 A, p. 243.
 Flower, W. H. 1867 A, p. 113.
 Gill, T. 1872 B, p. 15. (Delphininæ, Globiocephalinæ.)

- True, F. W. 1889 A, pp. 10, 13, 150.

DELPHINUS Linn. Type *D. delphis* Linn.

- Linnaeus, C.*, 1758, Syst. Nat., ed. 10, i, p. 77.
 Brandt, J. F. 1873 A, p. 244.
Cope, E. D. 1868 I, p. 186.

- Duvernoy, G. L. 1851 A. ("Dauphin.")
 Flower, W. H. 1883 B, pp. 500, 511.
 1883 D, p. 399.

Flower and Lydekker 1891 A, p. 271.
 Gervais, P. 1859 A, p. 301.
 Gray, J. E. 1866 A, p. 239.
 Nicholson and Lydekker 1889 A, p. 1307.
 Pictet, F. J. 1853 A, p. 381.
 Trouessart, E. L. 1898 A, p. 1031.
 True, F. W. 1889 A, pp. 44, 160.
 Zittel, K. A. 1893 B, p. 175.

Delphinus occiduus Leidy.

Leidy, J. 1868 E, p. 197.
 Brandt, J. F. 1873 A, p. 286.

Cope, E. D. 1890 E, p. 616.
 Leidy, J. 1869 A, p. 431.
 1871 C, p. 365.
 Roger, O. 1896 A, p. 79.
 Tomes, C. S. 1898 A, p. 376.
 Trouessart, E. L. 1898 A, p. 1031.
 Miocene; California.

Delphinus sp. indet.

Wyman, J. 1850 B, p. 231, figs. 5-7.
 Leidy, J. 1869 A, p. 432.

DELPHINAPTERINÆ.

Gill, T. 1871 B, p. 124.
 1872 B, p. 15.

True, F. W. 1889 A, pp. 10, 11.

DELPHINAPTERUS Lacépède. Type *D. leucas* Pall.

Lacépède, B. G. E., 1804, Hist. Nat. Cét., p. xli.
 Brandt, J. F. 1873 A, p. 234.
 Cope, E. D. 1868 I, p. 186.
 1890 E, p. 609.
 Dawson, J. W. 1883 A, p. 201. (Beluga.)
 Flower, W. H. 1883 B, p. 505.
 1889 A, p. 146.
 Flower and Lydekker 1891 A, p. 262.
 Gray, J. E., 1828, Spicilegium Zool., i, p. 2. (Beluga.)
 1866 A, p. 307.
 Lydekker, R. 1887 A, p. 78.
 Probst, J. 1886 A, p. 129. (Beluga.)
 True, F. W. 1889 A, p. 146.
 Van Beneden and Gervais 1880 A, p. 531. (Beluga.)
 Zittel, K. A. 1893 B, p. 176. (Beluga.)

Delphinapterus leucas Pall.

Cope, E. D. 1890 E, pl. xxi.
 Dawson, J. W. 1883 A, p. 201. (Beluga catodon.)
 1895 B. (B. catodon.)
 Flower and Lydekker 1891 A, p. 262, fig. 91.
 Owen, R. 1863 A, p. 281.
 Trouessart, E. L. 1898 A, p. 1050.
 True, F. W. 1889 A, p. 187, pl. xlvii, figs. 1, 2.
 Recent; Arctic seas. Pleistocene; Ontario.

Delphinapterus orcina Cope.

Cope, E. D. 1875 V, p. 49.
 1890 E, p. 610.
 Roger, O. 1896 A, p. 80. (Beluga.)
 Trouessart, E. L. 1898 A, p. 1051.
 Miocene; North Carolina.

Delphinapterus vermontana (Thomp.).

Thompson, Z. 1850 A, p. 257, figs. 1-13. (Delphinus.)
 Amer. Naturalist 1871 A. (Beluga.)
 Brandt, J. F. 1873 A, p. 289. (Beluga.)
 Cope, E. D. 1867 C, p. 144. (Beluga.)
 1890 E, p. 610.
 Dawson, J. W. 1878 A, supp., p. 28. (Beluga.)
 1883 A, p. 201. (Beluga.)
 Gilpin B, 1873 A. (Beluga vermontana?)
 Honeyman, D. 1874 A. (Beluga.)
 1874 B. (Beluga.)
 Leidy, J. 1869 A, p. 436. (Beluga.)
 Logan, W. E. 1863 A, p. 919. (Beluga.)
 Thompson, Z. 1853 A, p. 15, figs. 1-13. (Beluga.)
 1859 A, p. 299. (Beluga.)
 Trouessart, E. L. 1898 A, p. 1051.
 Pleistocene; Vermont, Quebec.

MONODON Linn. Type *M. monoceros* Linn.

Linnæus, C., 1758, Syst. Nat., ed. 10, i, p. 75.
 Berthold, A. A. 1850 A.
 Brandt, J. F. 1873 A, p. 231.
 Clark, J. W. 1871 A.
 Flower, W. H. 1883 B.
 1883 D.
 Flower and Lydekker 1891 A, p. 260.
 Gray, J. E. 1866 A, p. 310.
 Jaeger, G. 1851 A.
 Leboucq, H. 1887 A, p. 203.
 Lydekker, R. 1887 A, p. 78.
 Nicholson and Lydekker 1889 A, p. 1307.
 Owen, R. 1845 B, p. 347.
 1868 A, p. 279, fig. 220.
 Pictet, F. J. 1853 A, p. 384.
 Smith, J. 1895 A, p. 331.
 Van Beneden and Gervais 1880 A, p. 523.
 Zittel, K. A. 1893 B, p. 176.

Monodon monoceros Linn.

Linnæus, C., 1758, Syst. Nat., ed. 10, i, p. 75.

Barton, B. S. 1805 A, p. 98. ("Monodon.")
 Brandt, J. F. 1873 A, p. 232.
 Clark, J. W. 1871 A.
 Flower, W. H. 1883 D, p. 398, fig. 49.
 Flower and Lydekker 1891 A, p. 261, fig. 90.
 Gray, J. E. 1866 A, p. 311.
 Jaeger, G. 1857 A, p. 571.
 Lydekker, R. 1887 A, p. 78.
 Nicholson and Lydekker 1889 A, p. 1307.
 Owen, R. 1845 B, p. 347, pl. lxxxvii. ("Monodon.")
 Tomes, C. S. 1898 A, p. 381, fig. 174.
 Trouessart, E. L. 1898 A, p. 1052.
 Turner, H. N. 1872 A.
 1873 A.
 1876 A.
 Van Beneden and Gervais 1880 A, p. 523, pl. xlv, figs. 6-9; pl. xlv.
 Zittel, K. A. 1893 B, p. 176.
 Recent; Arctic seas. Pleistocene; Alaska.

PHYSETERIDÆ.

- Cope, E. D. 1889 C, p. 207.
 1890 E, p. 606.
 1895 A, p. 137. (Choneziphiidæ.)
 Duvernoy, G. L. 1851 A. ("Les cachalots.")
 Flower, W. H. 1867 A, p. 113.
 1868 B, p. 345.
 1883 D, p. 395.
 Flower and Lydekker 1891 A, p. 247.
 Gill, T. 1871 B, p. 123.
 1872 B, pp. 15, 96. (Physeteridæ, Ziphiidæ.)

- Gray, J. E. 1866 A, p. 195. (Catodontidæ.)
 Huxley, T. H. 1872 A, p. 340.
 Lydekker, R. 1887 A, p. 53.
 Nicholson and Lydekker 1889 A, p. 1305.
 Pouchet and Beauregard 1889 A.
 Roger, O. 1896 A, p. 80.
 Van Beneden, P. J. 1877 B. (Physeterula.)
 Zittel, K. A. 1893 B, p. 176.

PHYSETERINÆ.

- Brandt, J. F. 1873 A, p. 205.
 Flower, W. H. 1867 A, p. 114.
 1883 D, p. 395.

- Gill, T. 1871 B, p. 124.
 1872 B, pp. 15, 96.
 Zittel, K. A. 1893 B, p. 177.

PHYSETER Linn. Type *P. macrocephalus* Linn.

- Linnæus, C.*, 1758, Syst. Nat., ed. 10, i, p. 76.
 Brandt, J. F. 1873 A, p. 205.
 Cope, E. D. 1890 E, p. 606.
 Flower, W. H. 1868 B.
 1885 A.
 Flower and Lydekker 1891 A, p. 248.
 Gray, J. E. 1866 A, p. 210.
 Harlan, R. 1834 B, pp. 74, 75. (Megistosaurus, Nephrosteon, synonyms of Physeter.)
 1835 A, p. 76. (Megistosaurus.)
 1835 B, p. 279. (Megistosaurus, Nephrosteon.)
 Huxley, T. H. 1872 A, p. 340.
 Leidy, J. 1856 L, p. 255. (Orycterocetus, type *O. quadratidens*.)
 1857 A, p. 271. (Orycterocetus.)
 1869 A, p. 436 (Orycterocetus); p. 444 (Physeter.)
 1876 A, p. 176. (Dinoziphius.)
 Owen, R. 1845 B, p. 353.
 Probst, J. 1886 A.
 Van Beneden and Gervais 1880 A, p. 303 (Physeter); p. 344 (Dinoziphius).
 Zittel, K. A. 1893 B, p. 177.

Physeter carolinensis (Leidy).

- Leidy, J.* 1877 A, p. 216, pl. xxxiv, fig. 6. (Dinoziphius.)
 Cope, E. D. 1890 E, p. 608. (Hoplocetus; may not refer to *P. carolinensis*.)

Physeter macrocephalus Linn.

- Linnæus, C.*, 1758, Syst. Nat., ed. 10, i, p. 76.
 Flower, W. H. 1868 B, pls. lv-lxi.
 Gibbs, R. W. 1850 B. ("Physeter.")

- Gray, J. E. 1866 A, p. 212. (Physeter tursio.)
 Harlan, R. 1828 A, p. 186.
 1835 A, p. 76.
 1835 B, p. 279. (Megistosaurus and Nephrosteon=Physeter macrocephalus.)
 Jaeger, G. 1857 A, p. 573.
 Leidy, J. 1869 A, p. 444.
 Owen, R. 1845 B, p. 353, pls. lxxxix, lxxxix a.
 1868 A, p. 281.
 Rafinesque, C. S., 1833, Atlantic Journal, p. 12.
 ("Nephrosteon.")
 Roger, O. 1896 A, p. 80.
 Tomes, C. S. 1898 A, p. 378.
 Trouessart, E. L. 1898 A, p. 1056.
 Recent in warm seas: Pleistocene?; Louisiana.
 "A doubtful fossil."

Physeter vetus (Leidy).

- Leidy, J.* 1853 C, p. 378. (P. antiquus, preoccupied by Gervais.)
 Brandt, J. F. 1873 A, p. 289. (Catodon.)
 Cope, E. D. 1869 N, p. 739. (P. antiquus.)
 1875 V, p. 50.
 1890 E, p. 615.
 Emmons, E. 1858 B, p. 212, fig. 34. (P. antiquus.)
 Gibbs, R. W. 1847 B, p. 11. (P. macrocephalus?)
 1850 B. (Catodon.)
 Leidy, J. 1860 B, p. 117, pl. xxiv, figs. 8, 9. (P. antiquus.)
 1869 A, p. 436. (Catodon.)
 Roger, O. 1896 A, p. 80.
 Trouessart, E. L. 1898 A, p. 1055.
 Pleistocene; South Carolina. Miocene; North Carolina, Virginia, New Jersey.

ORYCTEROCETUS Leidy. Type *O. quadratidens* Leidy.

- Leidy, J.* 1853 C, p. 378.
 Cope, E. D. 1890 E, p. 607. (Syn. of Physeter.)
 Leidy, J. 1857 A, p. 271.
 1869 A, p. 436.
 Trouessart, E. L. 1898 A, p. 1055. (Syn. of Physeter.)
 Zittel, K. A. 1893 B, p. 177. (Syn. of Physeter.)

Orycterocetus cornutidens Leidy.

- Leidy, J.* 1856 L, p. 255, in part.

- Brandt, J. F. 1873 A, p. 289.
 Cope E. D. 1867 C, p. 144. (*O. crocodilinus*.)
 1875 V, p. 50.
 1890 E, p. 615. (Physeter.)
 Emmons, E. 1858 B, p. 211, fig. 33.
 Leidy, J. 1857 A, p. 271.
 1869 A, p. 437.
 Roger, O. 1896 A, p. 80. (Physeter.)
 Trouessart, E. L. 1898 A, p. 1055. (Physeter.)
 Miocene; North Carolina, Maryland.

Orycterocetus quadratidens Leidy.*Leidy, J.* 1853 C, p. 378.

Brandt, J. F. 1873 A, p. 289.

Cope, E. D. 1875 V, p. 50.

1890 E, p. 615. (Physeter.)

Emmons, E. 1858 B, p. 210, fig. 32.

Leidy, J. 1856 L, p. 255. (O. cornutidens, in part.)
1857 A, p. 271.

1869 A, p. 436, pl. xxx, figs. 16, 17.

Roger, O. 1896 A, p. 81. (Physeter.)

Trouessart, E. L. 1898 A, p. 1055. (Physeter.)

Miocene; Virginia, North Carolina.

HYPOCETUS Lydekker. Type *Mesocetus poucheti* Moreno.*Lydekker, R.* 1893 D, p. 7 (Hypocetus); p. 8 (Paracetus).Ameghino, F. 1894 A, p. 437. (Diaphorocetus, to replace *Mesocetus* Moreno, preoccupied.)

Cope, E. D. 1895 A, p. 135. (Paracetus.)

Lydekker, R. 1896 B, p. 68.

Moreno, F. P. 1892 A, p. 395, pl. x. (*Mesocetus*, type *M. poucheti*; not *Mesocetus* of Van Beneden.)

Trouessart, E. L. 1898 A, p. 1052. (Diaphorocetus.)

Hypocetus mediatlanticus (Cope).*Cope, E. D.* 1895 A, p. 135. (Paracetus.)

Roger, O. 1896 A, 81. (Paracetus.)

Trouessart, E. L. 1898 A, p. 1053. (Diaphorocetus.)

Miocene; Maryland.

HOPLOCETUS Gervais. Type *H. crassidens* Gervais.*Gervais, P.* 1852, Zool. Paléont. Franc., ed. 1, p. 26.

Cope, E. D. 1890 E, p. 607.

Flower and Lydekker 1891 A, p. 251.

Leidy, J. 1869 A, p. 438.

Lydekker, R. 1887 A, p. 60.

Owen, R. 1846 B, p. 536. (*Balanodon*, type *B. physaloides*; may not be identical genus.)

Pictet, F. J. 1853 A, p. 388.

Probst, J. 1886 A, p. 106.

Van Beneden and Gervais 1880 A, p. 239.

Zittel, K. A. 1893 B, p. 177.

Hoplocetus obesus Leidy.*Leidy, J.* 1868 E, p. 196.

Brandt, J. F. 1873 A, p. 290.

Cope, E. D. 1890 E, p. 608 (*H. carolinensis*); p. 615 (*H. obesus*).

Leidy, J. 1869 A, p. 438, pl. xxx, figs. 13-15.

Trouessart, E. L. 1898 A, p. 1054.

Miocene; California.

Professor Cope's name, *H. carolinensis*, more probably refers to *Physceter carolinensis*; or it may be due to a confusion of the two names.ONTOCETUS Leidy. Type *O. emmonsi* Leidy.*Leidy, J.* 1859 G, p. 162.

1869 A, p. 440.

A genus of doubtful position.

Ontocetus emmonsi Leidy.*Leidy, J.* 1859 G, p. 162.

Brandt, J. F. 1873 A, p. 290.

Cope, E. D. 1867 C, p. 144.

1875 V, p. 51.

Emmons, E. 1860 A, p. 219.

Leidy, J. 1869 A, p. 440.

Trouessart, E. L. 1898 A, p. 1055. (Hoplocetus.)

Miocene; North Carolina.

ZIPHIINÆ.

Brandt, J. F. 1873 A, p. 209.

Flower, W. H. 1867 A, p. 114.

1872 A.

1883 D, p. 396.

Gill, T. 1872 B, p. 15.

Flower and Lydekker 1891 A, p. 251.

Gervais, P. 1850 A. (Ziphioides.)

Gervais, P. 1859 A, pp. 285, 291. ("Ziphidés.")

Lydekker R. 1887 A, p. 63.

Owen, R. 1889 A. (Ziphius.)

Probst, J. 1886 A, p. 108. (Ziphioidæ.)

Roger, O. 1896 A, p. 81.

Zittel, K. A. 1893 B, p. 178.

CHONEZIPHIUS Duvernoy. Type *Ziphius planirostris* Cuv.*Duvernoy, G. L.* 1851 A, p. 61.

Brandt, J. F. 1873 A, p. 218.

Cope, E. D. 1890 E, pp. 607, 608, part.

Flower and Lydekker 1891 A, p. 257.

Gervais, P. 1859 A, p. 288.

Leidy, J. 1877 A, p. 218.

Lydekker, R. 1887 A, p. 64.

Owen, R. 1889 A, p. 35.

Pictet, F. J. 1853 A, p. 385.

Trouessart, E. L. 1898 A, p. 1059, part.

Van Beneden and Gervais 1880 A, p. 413.

Zittel, K. A. 1893 B, p. 178.

Choneziphius cœlops (Leidy).*Leidy, J.* 1876 A, p. 81. (Eboroziphius.)

Cope, E. D. 1890 E, p. 616.

Leidy, J. 1877 A, p. 224, pl. xxx, fig. 5; pl. xxxi, fig. 3. (Eboroziphius.)

Roger, O. 1896 A, p. 82.

Trouessart, E. L. 1898 A, p. 1060.

Tertiary (Phosphate beds); South Carolina.

Choneziphius liops Leidy.

Leidy, J. 1876 A, p. 81.

Cope, E. D. 1890 E, p. 616.

Leidy, J. 1877 A, p. 222, pl. xxx, fig. 1; pl. xxxi, fig. 2.

Roger, O. 1896 A, p. 82.

Trouessart, E. L. 1898 A, p. 1060.

Tertiary (Phosphate beds); South Carolina.

Choneziphius trachops Leidy.

Leidy, J. 1876 A, p. 81.

Cope, E. D. 1890 E, pp. 608, 615.

Leidy, J. 1877 A, p. 218, pl. xxx, fig. 2; pl. xxxi, fig. 1.

Roger, O. 1896 A, p. 82.

Trouessart, E. L. 1898 A, p. 1060.

Tertiary (Phosphate beds); South Carolina.

PROROZIPHIUS Leidy. Type *P. macrops* Leidy.

Leidy, J. 1876 E, p. 87.

1877 A, p. 227.

Trouessart, E. L. 1898 A, p. 1060. (Syn. of *Choneziphius*.)

Proroziphius chonops Leidy.

Leidy, J. 1876 F, p. 114.

Cope, E. D. 1890 E, p. 616. (*Choneziphius*.)

Leidy, J. 1877 A, p. 229, pl. xxxii, figs. 3, 4.

Roger, O. 1896 A, p. 82. (*Choneziphius*.)

Trouessart, E. L. 1898 A, p. 1060. (*Choneziphius*.)
Tertiary (Phosphate beds); South Carolina.

Proroziphius macrops Leidy.

Leidy, J. 1876 E, p. 87.

Cope, E. D. 1890 E, p. 616. (*Choneziphius*.)

Leidy, J. 1877 A, p. 227, pl. xxxii, figs. 1, 2.

Roger, O. 1896 A, p. 82. (*Choneziphius*.)

Trouessart, E. L. 1898 A, p. 1060. (*Choneziphius*.)

Tertiary (Phosphate beds); South Carolina.

PELYCORHAMPHUS Cope. Type *P. pertortus* Cope.

Cope, E. D. 1895 A, p. 137.

Pelycorhamphus pertortus Cope.

Cope, E. D. 1895 A, p. 137.

Trouessart, E. L. 1898 A, p. 1057.

Miocene. Locality unknown.

ANOPLONASSA Cope. Type *A. forcipata* Cope.

Cope, E. D. 1869 E, p. 189.

1869 O.

1890 F, p. 700.

1895 A, p. 138.

Trouessart, E. L. 1898 A, pp. 1003, 1057.

Zittel, K. A. 1893 B, p. 179.

Anoplonassa forcipata Cope.

Cope, E. D. 1869 E, p. 189, pl. v, fig. 5.

Brandt, J. F. 1873 A, p. 289.

Cope, E. D. 1869 O.

1890 F, p. 700, fig. 2.

Leidy, J. 1869 A, p. 436.

Roger, O. 1896 A, p. 82.

Trouessart, E. L. 1898 A, p. 103.

Van Beneden and Gervais 1880 A, p. 386, text figure.

Tertiary (Phosphate beds); South Carolina.

MESOPLODON Gervais. Type *Delphinus sowerbensis*.

Gervais, P. 1850 A, p. 16.

Brandt, J. F. 1873 A, p. 220. (*Mesoödon*.)

Cope, E. D. 1890 E, p. 607.

Flower, W. H. 1872 A, p. 209.

Flower and Lydekker 1891 A, p. 254.

Forbes, H. O. 1893 A.

Gervais, P. 1850 A, p. 16. (*Dioplodon*.)

1859 A, p. 289 (*Dioplodon*); p. 290 (*Mesoplodon*).

Huxley, T. H. 1864 A, p. 388. (*Micropteron*; *Belemnoziphius*, type *B. compressus*.)

Leidy, J. 1876 A, p. 81. (*Belemnoziphius*.)

1877 A, p. 226. (*Dioplodon*.)

Owen, R. 1889 A, p. 38. (*Belemnoziphius*.)

Probst, J. 1886 A, p. 113.

Trouessart, E. L. 1898 A, p. 1063.

Van Beneden and Gervais 1880 A, p. 392 (*Mesoplodon*); pp. 403, 419 (*Dioplodon*).

Zittel, K. A. 1893 B, p. 179. (*Mesoplodon*, *Dioplodon*.)

Mesoplodon prorops (Leidy).

Leidy, J. 1876 A, p. 81. (*Belemnoziphius*.)

Cope, E. D. 1890 E, p. 616.

Leidy, J. 1877 A, p. 226, pl. xxx, figs. 3, 4. (*Dioplodon*.)

Roger, O. 1896 A, p. 82.

Trouessart, E. L. 1898 A, p. 1065.

Van Beneden, P. J. 1880 A. (*Ziphius longirostris*; =? *M. prorops*.)

Tertiary (Phosphate beds); South Carolina.

Suborder MYSTICETE.

- Brandt, J. F. 1873 A, p. 17. (Balænoidea.)
 Cope, E. D. 1889 R, p. 876. (Mystacoceti.)
 1890 E, p. 610. (Mysticete.)
 1898 B, p. 109. (Mysticete.)
 Flower, W. H. 1864 A, p. 388. (Balænoidea, or Mysticete.)
 1867 A, p. 110. (Mystacoceti, or Balænoidea.)
 1876 B, xiii, p. 450. (Mystacoceti.)
 1883 D, p. 394. (Mystacoceti.)
 Flower and Lydekker 1891 A, p. 234. (Mystacoceti.)
 Gadow, H. 1898 A, p. 44. (Mystacoceti.)
 Gill, T. 1871 B, p. 122. (Mysticete.)
 1872 B, pp. 16, 97. (Mysticete.)
 Gill, T. 1873 C, p. 25. (Mysticete.)
 Gray, J. E. 1866 A, pp. 68, 194. (Mysticete.)
 Haeckel, E. 1895 A, p. 566. (Mysticeta.)
 Huxley, T. H. 1872 A, p. 336. (Balænoidea.)
 Kükenthal, W. 1891 A, p. 365. ("Bartenwale.")
 Leboncq, H. 1887 A. ("Mysticétes.")
 Murie, J. 1865 A.
 Roger, O. 1896 A, p. 83. (Mystacoceti.)
 Ryder, J. 1878 A.
 Van Beneden, P. J. 1880 B, p. 11. ("Mysticétes.")
 Van Beneden and Gervais 1880 A, pp. 29, 239. ("Mysticétes.")
 Woodward, A. S. 1898 B, p. 273. (Mystacoceti.)
 Zittel, K. A. 1893 B, p. 180. (Mystacoceti.)

BALÆNIDÆ.

- Brandt, J. F. 1873 A, p. 18 (Balænidæ); p. 26. (Balænopteridæ.)
 Carte and Macalister 1868 A. (>Balænopteridæ.)
 Cope, E. D. 1889 R, p. 876.
 1890 E, p. 611.
 1895 A, p. 139.
 Cuvier, G. 1834 A, viii, pt. ii, pp. 249-332. ("Baleines.")
 Duvernoy, G. L. 1851 A. ("Les Baleines.")
 Flower, W. H. 1864 A. (Balænidæ, Balænopteridæ.)
 1867 A, p. 115. (>Balænopterinæ.)
 1876 B, xiii, p. 450. (Balænidæ, Balænopteridæ.)
 1883 D, p. 394.
 Flower and Lydekker 1891 A, p. 234.
 Gervais, P. 1871 A.
 Gray, J. E. 1866 A, p. 75 (Balænidæ); p. 106 (Balænopteridæ.)
 Holder, J. B. 1883 A.
 Huxley, T. H. 1872 A, p. 339.
 Kükenthal, W. 1890 C.
 Marsh, O. C. 1877 E.
 Murie, J. 1865 A. (Balænopteridæ.)
 Nicholson and Lydekker 1889 A, p. 1302.
 Owen, R. 1866 B, p. 415.
 1868 A, p. 276.
 Roger, O. 1896 A, p. 83 (Balænidæ); p. 87 (Balænopteridæ.)
 Struthers, J. 1871 A. (>Balænopteridæ.)
 1872 A. (>Balænopteridæ.)
 1881 A. (>Balænidæ.)
 1893 A. (Balænidæ, Balænopteridæ.)
 1895 A. (>Balænidæ.)
 Van Beneden P. J. 1872 A. (>Balænidæ.)
 1880 A. (>Balænidæ.)
 1882 A. (Balænidæ, Balænopteridæ.)
 Zittel, K. A. 1893 B, p. 181 (Balænidæ); p. 183 (Balænopteridæ.)

METOPOCETUS Cope. Type *M. durinasus* Cope.

Cope, E. D. 1896 J, p. 141.

Metopocetus durinasus Cope.

Cope, E. D. 1896 J, p. 141, pl. xi, fig. 3.

Trouessart, E. L. 1898 A, p. 1069.
 Miocene; Maryland.

CEPHALOTROPUS Cope. Type *C. coronatus* Cope.

Cope, E. D. 1896 J, pp. 141, 143.

Cephalotropus coronatus Cope.

Cope, E. D. 1896 J, p. 143, pl. xi, fig. 2.

Trouessart, E. L. 1898 A, p. 1069.
 Miocene; Maryland?

CETOTHERIUM Brandt. Type *C. rathkii* Brandt.

Brandt, J. F., 1843, Bull. Acad. Imp. St. Petersburg, i, p. 145.

1844 A.

1873 A, pp. 61, 142, 143.

Cope, E. D. 1869 G, p. 10. (Eschrichtius.)

1890 E, p. 612.

1895 A, p. 140.

1896 J, p. 141.

Flower and Lydekker 1891 A, p. 245.

Gaudry, A. 1878 B, p. 32. (Plesiocetus.)

Gray, J. E. 1866 A, p. 131, figs. 21, 22. (Eschrichtius.)

Lydekker, R. 1887 A, p. 42.

1893 D, pt. ii, p. 2.

Pictet, F. J. 1853 A, p. 388.

Van Beneden, P.-J. 1872 A, p. 416.

1872 B, p. 15 (Plesiocetus); p. 16 (Cetotherium).

1875 A. (Plesiocetus.)

1880 B, p. 17. (Plesiocetus.)

Van Beneden and Gervais 1880 A, p. 268. (Cetotherium); p. 274 (Plesiocetus.)

Zittel, K. A. 1893 B, p. 181 (Plesiocetus); p. 182 (Cetotherium).

Cetotherium cephalum Cope.

- Cope, E. D.* 1867 B, p. 131. (Eschrichtius.)
 1867 C, p. 148. (Eschrichtius.)
 1869 G, pp. 10, 11. (Eschrichtius.)
 1890 E, p. 613, pl. xxii, text fig. 7.
 1891 N, fig. 39.
 1896 J, p. 146, pl. xii, fig. 2.
Dana, J. D. 1896 A, p. 912, fig. 1539.
Leidy, J. 1869 A, p. 442. (Eschrichtius.)
Roger, O. 1896 A, p. 84.
Trouessart, E. L. 1898 A, p. 1071.
 Miocene; Maryland.

Cetotherium davidsonii Cope.

- Cope, E. D.* 1872 Z, p. 29. (Eschrichtius.)
Bowers, S. 1889 A. (Eschrichtius.)
Cope, E. D. 1890 E, p. 616. (Balænoptera.)
 1896 J, p. 146, pl. xii, fig. 4.
Roger, O. 1896 A, p. 86. (Balænoptera.)
Trouessart, E. L. 1898 A, p. 1079. (Referred to
 Balænoptera davidsoni Scammon.)
 Miocene; California.

Cetotherium leptocentrum Cope.

- Cope, E. D.* 1867 C, p. 147. (Eschrichtius.)
 1869 G, p. 11. (Eschrichtius.)
 1890 E, p. 616.
 1895 A, p. 148. (C. crassangulum.)
 1896 J, p. 145, pl. xii, fig. 1.
Leidy, J. 1869 A, p. 442.
Roger, O. 1896 A, p. 84 (C. leptocentrum); p. 85
 (C. crassangulum).
Trouessart, E. L. 1898 A, p. 1071.
 Miocene; Virginia.

Cetotherium megalophysum Cope.

- Cope, E. D.* 1895 A, p. 146.
 1896 J, p. 143, pl. xi, fig. 1.
Roger, O. 1896 A, p. 84.

SIPHONOCETUS Cope. Type *Balæna priscus* Leidy.

- Cope, E. D.* 1895 A, p. 140.
Trouessart, E. L. 1898 A, p. 1074.

Siphonocetus clarkianus Cope.

- Cope, E. D.* 1895 A, p. 140, pl. vi, fig. 4.
Roger, O. 1896 A, p. 85.
Trouessart, E. L. 1898 A, p. 1074.
 Miocene; Maryland.

Siphonocetus expansus Cope.

- Cope, E. D.* 1868 I, p. 193. (Megaptera.)
 1869 G, p. 11. (Eschrichtius.)
 1890 E, p. 616. (Cetotherium.)
 1895 A, p. 140, pl. vi, fig. 5.
Leidy, J. 1869 A, p. 442. (Eschrichtius.)
Roger, O. 1896 A, p. 85.

- Trouessart, E. L.* 1898 A, p. 1071.
 Miocene; Maryland?

Cetotherium mysticetoides (Emmons).

- Emmons, E.* 1858 B, p. 205, fig. 26. (Balæna.)
Cope, E. D. 1875 V, p. 42. (Eschrichtius.)
 1890 E, p. 616.
Leidy, J. 1869 A, p. 440. (Balæna.)
Roger, O. 1896 A, p. 84 (Cetotherium); p. 87 (Balæna).
Trouessart, E. L. 1898 A, p. 1071 (Cetotherium); p. 1092 (Balæna).
Van Beneden, P. J. 1882 A, p. 23.
 Miocene; North Carolina.

Cetotherium parvum Trouessart.

- Trouessart, E. L.* 1898 A, p. 1071. (To replace C.
 pusillum Cope, not of Nordmann.)
Cope, E. D. 1868 G, p. 159. (Balænoptera pusilla.)
 1868 I, p. 190 (?Delphinapterus tyrannus); p.
 191 (Eschrichtius pusillus).
 1869 G, p. 7 (?Delphinapterus tyrannus); p.
 11 (Eschrichtius pusillus).
 1890 E, p. 616. (C. pusillum).
 1895 A, p. 145. (C. pusillum.)
Leidy, J. 1869 A, p. 442. (Eschrichtius pusillus.)
Roger, O. 1896 A, p. 84. (C. pusillum.)
 Miocene; Maryland, South Carolina.

Cetotherium polyporum Cope.

- Cope, E. D.* 1869 I. (Eschrichtius.)
 1870 F, p. 285. (Eschrichtius.)
 1875 V, p. 42, pl. v, figs. 3, 3a. (Eschrichtius.)
 1890 E, p. 616.
 1895 A, p. 149, pl. vi, fig. 7.
Roger, O. 1896 A, p. 84.
Trouessart, E. L. 1898 A, p. 1071.
 Miocene; North Carolina.

- Trouessart, E. L.* 1898 A, p. 1074.
 Miocene; Virginia, Maryland.

Siphonocetus priscus (Leidy).

- Leidy, J.* 1851 F, p. 308. (Balæna.)
Cope, E. D. 1867 B, p. 132. (Balæna.)
 1867 C, p. 144. (Balænoptera.)
 1868 I, p. 193. (Balænoptera.)
 1869 G, pp. 10, 11. (Eschrichtius.)
 1890 E, p. 616. (Cetotherium.)
 1895 A, p. 140, pl. vi, fig. 3.
Leidy, J. 1869 A, p. 441. (Eschrichtius.)
Roger, O. 1896 A, p. 85.
Trouessart, E. L. 1898 A, p. 1074.
 Miocene; Virginia.

ULIAS Cope. Type *U. moratus* Cope.

- Cope, E. D.* 1895 A, p. 141.
Trouessart, E. L. 1898 A, p. 1074.

Ulias moratus Cope.

- Cope, E. D.* 1895 A, p. 141, pl. vi, fig. 1.
Roger, O. 1896 A, p. 85.
 Miocene; Maryland?

TRETULIAS Cope. Type *T. buccatus* Cope.

Cope, E. D. 1895 A, p. 143.
 Trouessart, E. L. 1898 A, p. 1074.

Tretulias buccatus Cope.

Cope, E. D. 1895 A, p. 143, pl. vi, fig. 2.

Roger, O. 1896 A, p. 85.
 Trouessart, E. L. 1898 A, p. 1074.
 Miocene; Maryland?

MESOCETUS Van Beneden. Type *M. longirostris* Van Beneden.

Van Beneden, P. J. 1880 B, p. 22.
 Cope, E. D. 1895 A, p. 153.
 Van Beneden, P. J. 1882 B.

Mesocetus siphunculus Cope.

Cope, E. D. 1895 A, p. 153.

Cope, E. D. 1896 J, p. 146, pl. xii, fig. 6.
 Roger, O. 1896 A, p. 85.
 Trouessart, E. L. 1898 A, p. 1076.
 Miocene; Virginia.

RHEGNOPSIS Cope. Type *Balæna palæatlanticus* Leidy.

Cope, E. D. 1896 J, p. 145.
 Leidy, J. 1869 A, p. 440 (Protobalæna, type *B. palæatlanticus*; preocc. by Van Beneden, 1867).
 Trouessart, E. L. 1898 A, p. 1077.

Rhegnopsis palæatlanticus (Leidy).

Leidy, J. 1851 F, p. 308. (Balæna.)
 Cope, E. D. 1867 B, p. 132. (Balæna.)

Cope, E. D. 1867 C, p. 147. (Balæna.)
 1868 I, p. 193. (Balænoptera.)
 1890 E, p. 616. (Balænoptera.)
 1896 J, p. 145, pl. xii, fig. 5.
 Leidy, J. 1869 A, p. 440. (Protobalæna.)
 Roger, O. 1896 A, p. 86. (Balænoptera.)
 Trouessart, E. L. 1898 A, p. 1077.
 Miocene; Virginia.

BALÆNOPTERA Lacépède.

Lacépède, B. G. É., 1804, Hist. Nat. d. Cétacés; Tab. ord., p. xxxvi.
 Brandt, J. F. 1873 A, p. 27.
 Carte and Macalister 1869 A.
 Cope, E. D. 1890 E, p. 612.
 Flower, W. H. 1864 A, p. 373.
 1885 A.
 Flower and Lydekker 1891 A, p. 242.
 Gray, J. E. 1866 A, pp. 186, 382.
 Lydekker, R. 1887 A, p. 34.
 Murie, J. 1865 A. (Physalus.)
 Struthers, J. 1871 A.
 Struthers, J. 1872 A.

Struthers, J. 1893 A.
 Tomes, C. S. 1898 A, p. 383.
 Van Beneden, P. J. 1880 B, p. 14.
 1882 A, p. 61.
 Van Beneden and Gervais 1880 A, p. 137.
 Zittel, K. A. 1893 B, p. 182.

Balænoptera sursiplana Cope.

Cope, E. D. 1895 A, p. 151.
 Roger, O. 1896 A, p. 86.
 Trouessart, E. L. 1898 A, p. 1077.
 Miocene; Maryland.

MEGAPTERA Gray. Type *M. longimana*.

Gray, J. E., 1846, Zool. "Erebus" and "Terror," p. 16.
 Flower, W. H. 1864 A.
 1883 D, p. 394.
 Flower and Lydekker 1891 A, p. 241.
 Gervais, P. 1871 A.
 Gray, J. E. 1866 A, p. 117.
 Lydekker, R. 1887 A, p. 31.
 Struthers, J. 1885 A.
 1888 A.
 Van Beneden, P. J. 1868 A.
 1880 B, p. 13.
 1882 A, p. 26.
 Van Beneden and Gervais 1880 A, p. 116.
 Zittel, K. A. 1893 B, p. 182.

Megaptera boops (Linn).

Linnaeus, C., 1758, Syst. Nat., ed. 10, i, p. 76. (Balæna.)
 Dawson, J. W. 1883 A, p. 202. (*M. longimana*.)
 Flower and Lydekker 1891 A, p. 241, fig. 79.
 Gervais, P. 1871 A.
 Gray, J. E. 1866 A, p. 119, figs. 14-18. (*M. longimana*.)
 Struthers, J. 1885 A, p. 124.
 1888 A.
 Trouessart, E. L. 1898 A, p. 1085.
 Van Beneden and Gervais 1880 A, p. 120, pl. x; pl. xi, figs. 1-8.
 Recent in North Atlantic: Pleistocene; Ontario.

MESOTERAS Cope. Type *M. kerrianus* Cope.

Cope, E. D. 1870 R, p. 128.
 1870 F, p. 286.
 1875 V, p. 44, pl. viii, fig. 1.
 1890 E, p. 613.
 Zittel, K. A. 1893 B, p. 183.

Mesoterias kerrianus Cope.

Cope, E. D. 1870 R, p. 128.

Cope, E. D. 1870 F, p. 286.
 1875 V, p. 44.
 1890 E, pp. 613, 616.
 Roger, O. 1896 A, p. 86.
 Trouessart, E. L. 1898 A, p. 1088.
 Miocene; North Carolina.

BALÆNA Linn. Type *B. mysticetus* Linn.

Linnaeus, C., 1758, Syst. Nat., ed. 10, i, p. 75.
Flower, W. H. 1864 A, p. 390.
 1883 D, p. 395.
 1885 A.
Flower and Lydekker 1891 A, p. 236.
Gervais, P. 1871 A.
Gray, J. E. 1866 A, p. 79.
Holder, J. B. 1883 A.
Huxley, T. H. 1872 A, p. 337.
Lydekker R. 1887 A, p. 16.
Nicholson and Lydekker 1889 A, p. 1303.
Owen, R. 1866 B, p. 415.
Parker, W. K. 1868 A, p. 217.
Pictet, F. J. 1853 A, p. 387.
Struthers, J. 1881 A.
 1893 A,
 1895 A.
Roger, O. 1896 A, p. 87.

Trouessart, E. L. 1898 A, p. 1089.
Van Beneden and Gervais 1880 A, p. 32.
Zittel, K. A. 1893 B, p. 183.

Balæna affinis Owen.

Owen, R. 1846 B, p. 530, fig. 221.
Cope, E. D. 1895 A, p. 152.
Emmons, E. 1858 B, p. 206. (Doubtful identification.)
Lydekker, R. 1887 A, p. 17, fig. 7.
Zittel K. A. 1893 B, p. 183.
 Miocene; England, Maryland?, North Carolina.
 For citations to descriptions of uncertain and unidentified remains of Cete see Leidy 1869 A, p. 443.

Order UNGULATA.

Baur, G. 1884 F.
Cope, E. D. 1873 E, p. 561.
 1873 F.
 1875 C, p. 26.
 1881 I.
 1882 Y.
 1883 D.
 1883 FF.
 1884 E.
 1885 O.
 1885 U.
 1887 I.
 1887 N.
 1888 T.
 1889 C.
 1889 R, pp. 875, 876.
Flower, W. H. 1883 D, p. 421.
 1885 A.
Flower and Lydekker 1891 A, p. 273.
Gadow, H. 1898 A, p. 45.
Gegenbaur, C. 1898 A.
Gill, T. 1872 A, p. 298.
 1872 B, pp. 8, 47, 70.
Haeckel, E. 1895 A, p. 524.
Huxley, T. H. 1872 A, p. 292.
Kowalevsky, W. 1873 A, p. 152.
 1874 A.
Leuthardt, F. 1891 A, p. 93.
Lydekker, R. 1885 C.
 1886 A.
 1886 B.
 1896 B.
Marsh, O. C. 1877 E.
 1884 F, p. 173.
Mettam, A. E. 1895 A.
Nicholson and Lydekker 1889 A, p. 1312.

Osborn, H. F. 1890 D.
 1892 H.
 1892 I.
 1893 A, p. 379.
 1893 D.
Owen R. 1845 B, p. 523.
 1851 C, p. 735.
 1868 A, p. 340.
Parker, W. K. 1868 A, p. 219. (Herbivora.)
Pauli, S. 1900 A.
Pavlov, M. 1888 A.
 1890 A.
 1892 A.
Roger, O. 1896 A, p. 142.
Rütimeyer, L. 1888 A.
 1891 A.
Ryder, J. A. 1878 A.
Schlosser, M. 1885 A.
 1886 A.
 1886 B.
 1887 A.
 1890 D.
 1892 A, p. 216.
Schmidt, O. 1886 A, p. 126.
Slade, D. D. 1888 A, p. 244.
 1893 A.
Steinmann and Döderlein 1890 A, p. 746.
Taeker, J. 1892 A.
Tomes, C. S. 1898 A, p. 390.
Trouessart, E. L. 1898 A, p.
Turner, H. N. 1848 A.
Wiedersheim, R. 1881 A, p. 360.
Woodward, A. S. 1898 B, p. 287.
Wortman, J. L. 1886 A, p. 469.
 1893 B, p. 421.
Zittel, K. A. 1893 B, p. 203.

Suborder CONDYLARTHRA Cope.

Cope, E. D. 1881 X, p. 1017.
Ameghino, F. 1891 C, p. 214.
 1896 A, p. 445.
Branco, W. 1897 A, p. 18.

Cope, E. D. 1882 A. (Taxeopoda, in part; Condylarthra.)
 1882 E, p. 178.
 1882 F.

- Cope, E. D. 1882 R.
 1882 Y. (Taxeopoda, in part; Condylarthra.)
 1883 D. (Taxeopoda, in part; Condylarthra.)
 1883 E.
 1884 C. (Taxeopoda, in part.)
 1884 O, pp. 378, 382 (Condylarthra); pp. 167, 374, 378 (Taxeopoda, in part).
 1884 AA.
 1885 K, p. 458.
 1885 O.
 1885 U.
 1886 Q, p. 238. (Taxeopoda, in part.)
 1887 I.
 1887 N. (Taxeopoda, in part.)
 1887 S, p. 342. (Taxeopoda, in part; Condylarthra.)
 1888 Q. (Taxeopoda, in part.)
 1888 T.
 1888 CC.
 1889 C. (Taxeopoda, in part; Condylarthra.)
 1891 N, p. 79. (Taxeopoda, in part; Condylarthra.)
 1892 S.
 1898 B, p. 120 (Condylarthra); pp. 106, 120 (Taxeopoda, in part).
 Earle, C. 1893 B.
 1893 D.
 Flower and Lydekker 1891 A, p. 438.
 Gadow, H. 1898 A, p. 46.
 Haeckel, E. 1895 A, pp. 529, 533.
 Hay, O. P. 1899 F, p. 682.
 Lydekker, R. 1885 E, p. 469. (Taxeopoda, in part.)
 1886 A, p. 172.
 Marsh, O. C. 1884 F, p. 171. (Protungulata.)
 1892 D, p. 445. (Mesodactyla.)
 Marsh, O. C. 1894 L, p. 26. (Mesodactyla.)
 Matthew, W. D. 1897 B, pp. 261, 323 (Protungulata); p. 293 (Condylarthra).
 Nicholson and Lydekker 1889 A, p. 1378
 Osborn, H. F. 1888 F.
 1890 D, p. 536.
 1892 I.
 1893 A, p. 383.
 1893 D.
 1898 H, p. 175.
 Osborn and Earle 1895 A, p. 47.
 Parsons, F. G. 1899 A.
 1900 A.
 Pavlow, M. 1887 A. (Taxeopoda, in part; Condylarthra.)
 1888 A.
 Röse, C. 1896 A, p. 84.
 Roger, O. 1896 A, p. 163.
 Rüttimeyer, L. 1888 A. (Taxeopoda, in part; Condylarthra.)
 1890 A. (Taxeopoda, in part; Condylarthra.)
 1891 A.
 Schlosser, M. 1884 B, p. 641.
 1885 A, p. 683.
 1886 B.
 1887 A.
 1888 A, p. 584.
 1889 A.
 1890 C.
 1892 A.
 Scott, W. B. 1892 A, p. 427.
 Steinmann and Döderlein 1890 A, p. 749.
 Tomes, C. S. 1898 A, p. 443.
 Woodward, A. S. 1898 B, p. 289.
 Wortman, J. L. 1883 A, p. 706. (Taxeopoda, in part.)
 1885 A, p. 297. (Taxeopoda, in part.)
 Zittel, K. A. 1893 B, pp. 213, 725.

PHENACODONTIDÆ.

- Cope, E. D. 1881 X, p. 1018.
 Ameghino, F. 1891 C, p. 215.
 Cope, E. D. 1882 E, p. 178.
 1882 F, pp. 95, 96.
 1882 R.
 1883 E.
 1884 O, pp. 384, 386.
 1884 AA, pp. 793, 892.
 1887 N, p. 986.
 Matthew, W. D. 1897 C, pp. 294, 299.
 1899 A, pp. 28, 29, 32.
 Nicholson and Lydekker 1889 A, p. 218.
 Osborn and Earle 1895 A, p. 49.
 Pavlow, M. 1887 A.
 1888 A.
 Roger, O. 1896 A, p. 165.
 Rüttimeyer, L. 1888 A, p. 44.
 Schlosser, M. 1885 A, p. 683.
 1886 B.
 1888 A, p. 585.
 1890 C.
 Steinmann and Döderlein 1890 A, p. 750.
 Wortman, J. L. 1882 B, p. 724.
 Zittel, K. A. 1893 B, p. 218.

OXYACODON Osb. and Earle. Type *O. apiculatus* Osb. and Earle.

- Osborn and Earle 1895 A, p. 25.
 Matthew, W. D. 1897 C, p. 292.
 1899 A, p. 28.
 Trouessart, E. L. 1898 A, p. 72.
 1899 A, p. 1290.

A genus of uncertain position; placed by Trouessart first in Primates, later in Carnivora; by Matthew in Creodonta *incertæ sedis*.

Oxyacodon agapetillus (Cope).

- Cope, E. D. 1884 K, p. 320. (Anisonchus.)
 1888 CC, p. 305. (Anisonchus.)
 Matthew, W. D. 1897 C, pp. 264, 292, fig. 10.

- Matthew, W. D. 1899 A, p. 28.
 Roger, O. 1896 A, p. 165. (Anisonchus.)
 Trouessart, E. L. 1899 A, p. 1290.
 Eocene (Puerco); New Mexico.

Oxyacodon apiculatus Osb. and Earle.

- Osborn and Earle 1895 A, p. 25, fig. 6.
 Matthew, W. D. 1897 C, p. 292.
 1899 A, p. 28.
 Roger, O. 1896 A, p. 252.
 Trouessart, E. L. 1898 A, p. 72.
 1899 A, p. 1290.
 Eocene (Puerco), New Mexico.

PROTOGONODON Scott. Type *Mioclanus pentacus* Cope.

Scott, W. B. 1892 B, p. 322.

Earle, C. 1893 B.

1893 D, p. 51.

Matthew, W. D. 1897 C. pp. 301, 302.

Osborn, H. F. 1894 A, p. 235.

Osborn and Earle 1895 A, pp. 64, 67.

Scott, W. B. 1892 A, p. 427.

Zittel, K. A. 1893 B, p. 586.

Protagonodon pentacus (Cope).

Cope, E. D. 1888 CC, p. 325. (*Mioclanus*.)

Earle, C. 1893 B.

Matthew, W. D. 1897 C, pp. 264, 302.

1899 A, p. 28.

Osborn and Earle 1895 A, p. 67, figs. 20, 21.

Roger, O. 1896 A, p. 166.

Scott, W. B. 1892 A, p. 427.

1892 B, p. 322.

Eocene (Puerco); New Mexico.

Protagonodon stenognathus Matth.

Matthew, W. D. 1897 C, pp. 264, 302.

1899 A, p. 28.

Eocene (Puerco); New Mexico.

TETRACLÆNODON Scott. Type *Mioclanus flowerianus* Cope.

Scott, W. B. 1892 B, p. 299.

Cope, E. D. 1881 H, pp. 487, 492. (*Protoponia*, type *P. subquadrata*.)

1882 E, p. 178. (*Protoponia*.)

1882 F, p. 96. (*Protoponia*.)

1884 O, pp. 386, 424. (*Protoponia*.)

1884 AA, p. 893. (*Protoponia*.)

1887 I, p. 657. (*Protoponia*.)

1888 CC, p. 359. (*Protoponia*.)

1893, in Earle, C. 1893 B, p. 378. (*Euprotogonia*, to replace *Protoponia* preoccupied.)

1894 I, p. 594. (*Euprotogonia*.)

Earle, C. 1893 D, p. 50. (*Euprotogonia*.)

1898 A, p. 262. (*Euprotogonia*.)

Hay, O. P. 1899 A, p. 593.

Matthew, W. D. 1897 C. pp. 301, 303. (*Euprotogonia*.)

1899 A, p. 29.

Nicholson and Lydekker 1889 A, p. 1382. (*Protoponia*.)

Osborn, H. F. 1894 A, p. 235. (*Euprotogonia*.)

1898 A, p. 146. (*Euprotogonia*.)

1898 G, p. 163. (*Euprotogonia*.)

Osborn and Earle 1895 A, pp. 64, 66. (*Euprotogonia*.)

Pavlov, M. 1887 A. (*Protoponia*.)

Rütimeyer, L. 1888 A, p. 47. (*Protoponia*.)

Schlosser, M. 1894 A, p. 158. (*Protoponia*.)

Scott, W. B. 1892 A, p. 427 (*Protoponia*); p. 421 (*Tetraclænodon*).

1892 B, p. 299. (*Tetraclænodon*, type *Mioclanus flowerianus* Cope.)

1892 D, p. 78. (*Tetraclænodon*.)

Steinmann and Döderlein 1890 A, p. 751. (*Protoponia*.)

Trouessart, E. L. 1898 A, p. 724. (*Euprotogonia*.)

Zittel, K. A. 1893 B, p. 218 (*Protoponia*); p. 588 (*Tetraclænodon*).

Tetraclænodon minor (Matth).

Matthew, W. D. 1897 C, pp. 264, 310. (*Euprotogonia*.)

Cope, E. D. 1888 CC, p. 305. (*Protoponia zuniensis*, in part.)

Matthew, W. D. 1899 A, p. 29. (*Euprotogonia*.)

Eocene (Torrejon); New Mexico.

Tetraclænodon puercensis (Cope).

Cope, E. D. 1881 H. p. 492. (*Phenacodus*.)

1882 E, p. 180. (Syn. *Phenacodus vortmani*.)

1882 EE, p. 833. (*Protoponia plicifera*.)

1883 M, p. 561. (*Phenacodus calceolatus*.)

Cope, E. D. 1884 K, p. 309. (*Protoponia plicifera*.)

1884 O, pp. 433, 488, pl. xxv, figs. 12, 13; pl.

lvii f, figs. 8, 9 (*Phenacodus puercensis*);

pp. 433, 487, pl. xxiv g, fig. 7 (*Phenacodus*

calceolatus); p. 424, pl. xxv f, figs. 2, 3

(*Protoponia plicifera*).

1884 AA, p. 893, fig. 14 (*Protoponia plicifera*);

p. 900, fig. 22 (*Phenacodus puercensis*).

1885 J, p. 387. (*Phenacodus*.)

1887 I, p. 657. (*Phenacodus puercensis*.)

1888 CC, pp. 305, 359 (*Phenacodus puercensis*,

P. plicifera, *P. calceolata*); p. 330 (*Mioclanus flowerianus*).

Earle, C. 1893 D, p. 50. (*Euprotogonia*.)

Hay, O. P. 1899 A, p. 593. (*Tetraclænodon*.)

Matthew, W. D. 1897 C, pp. 264, 304, 320. (*Euprotogonia*.)

1899 A, p. 29.

Osborn, H. F. 1898 G, p. 163, fig. 4. (*Euprotogonia*.)

Osborn and Earle 1895 A, p. 65, fig. 19 (*Euprotogonia puercensis*); p. 65 (*Euprotogonia plicifera*).

Pavlov, M. 1887 A, figs. 1, 3. (*Phenacodus*.)

1888 A, p. 136. (*Phenacodus*.)

Roger, O. 1896 A, p. 32 (*T. flowerianus*); p. 165 (*Euprotogonia calceolata*, *E. puercensis*).

Schlosser, M. 1896 B, p. 135, pl. vi, fig. 33 (*Phenacodus puercensis*); pl. v, fig. 30; pl. vi, fig. 32 (*Protoponia plicifera*).

Scott, W. B. 1892 B, p. 300. (*Tetraclænodon flowerianus*.)

Trouessart, E. L. 1898 A, p. 724. (*Euprotogonia*.)

Wortman, J. L. 1896 A, p. 106, pl. ii, fig. A, text fig. 16 (*Euprotogonia puercensis*); pl. ii, fig. F, text fig. 17 (*Euprotogonia plicifera*).

Zittel, K. A. 1893 B, p. 218, fig. 158.

Eocene (Torrejon); New Mexico.

Tetraclænodon subquadratus Cope.

Cope, E. D. 1881 H, p. 492. (*Protoponia*.)

1884 O, p. 426, pl. lvii, figs. 11, 12. (*Protoponia*.)

1884 AA, p. 893. (*Protoponia*.)

1888 CC, p. 305. (Syn. of *Protoponia puercensis*.)

Matthew, W. D. 1897 C, p. 304. (Syn. of *Euprotogonia puercensis*.)

1899 A, p. 29. (Syn. of *Euprotogonia puercensis*.)

Osborn and Earle 1895 A, p. 64. (*Euprotogonia*.)

Pavlov, M. 1887 A, fig. 7. (*Protoponia*.)

Scott, W. B. 1892 A, p. 427, fig. 7. (*Protoponia*.)

Eocene (Torrejon); New Mexico.

PHENACODUS Cope. Type *P. primævus* Cope.

- Cope, E. D.* 1873 D, p. 3.
Baur, G. 1890 B.
Branco, W. 1897 A, p. 18.
Cope, E. D. 1875 C, p. 18.
 1877 K, p. 173.
 1881 H, p. 487.
 1881 X.
 1882 E, p. 177.
 1882 F, p. 96.
 1882 Y.
 1883 B, p. 275.
 1883 G.
 1883 BB.
 1884 O, pp. 386, 428.
 1884 AA, p. 893 (*Phenacodus*); p. 900 (*Tris-*
pondylus, type *P. vortmani*).
 1885 K, p. 458.
 1886 L.
 1886 Q.
 1888 T.
 1889 C.
 1889 J, p. 192.
 1892 S, p. 411.
Earle, C. 1893 D.
Flower and Lydekker 1889 A, p. 439.
Leuthardt, F. 1891 A.
Lockwood, S. 1886 A, p. 325.
Lydekker R. 1886 D, p. 326.
 1889 K.
Marsh, O. C. 1892 C, p. 352. (Syn. of *Helohyus*).
Matthew, W. D. 1897 C, pp. 299, 301, 308.
Nicholson and Lydekker 1889 A, p. 1380.
Osborn, H. F. 1890 D, p. 532.
 1893 D.
Owen, R. 1886 B.
Pavlow, M. 1887 A.
 1888 A, p. 135.
 1900 A, p. 46.
Roger, O. 1889 A.
Rütimeyer, L. 1888 A, p. 38.
Schlosser, M. 1885 A, p. 683.
 1886 A, pp. 252, 432.
 1886 B.
 1894 A, p. 158.
Scott, W. B. 1892 A, p. 405.
Steinmann and Döderlein 1890 A, p. 751.
Tomes, C. S. 1898 A, p. 443.
Woodward, A. S. 1898 B, p. 290.
Woodward, H. 1886 B.
Wortman, J. L. 1882 B, p. 725.
 1883 A, p. 708, fig. 125.
 1886 A, p. 472.
Zittel, K. A. 1893 B, p. 219.
- Phenacodus brachypternus* Cope.**
Cope, E. D. 1882 E, pp. 179, 180.
 1884 O, pp. 433, 490, pl. xxv e, fig. 14.
 1884 AA, p. 901, fig. 24.
Matthew, W. D. 1899 A, p. 32.
Roger, O. 1896 A, p. 166.
Trouessart, E. L. 1898 A, p. 725.
 Eocene (Wasatch); Wyoming.
- Phenacodus hemiconus* Cope.**
Cope, E. D. 1882 E, p. 179.
 1884 O, pp. 433, 463, pl. xxv e, fig. 16.
- Matthew, W. D.* 1899 A, p. 32.
Roger, O. 1896 A, p. 166.
Trouessart, E. L. 1898 A, p. 725.
 Eocene (Wasatch); Wyoming.
- Phenacodus macropternus* Cope.**
Cope, E. D. 1882 E, pp. 179, 180.
 1884 O, pp. 433, 490, pl. xxv e, fig. 15.
Matthew, W. D. 1899 A, p. 32.
Roger, O. 1896 A, p. 166.
Trouessart, E. L. 1898 A, p. 725.
 Eocene (Wasatch); Wyoming.
- Phenacodus nuniënus* Cope.**
Cope, E. D. 1884 O, pp. 433, 434, pl. lvii h, figs. 1, 2.
 1884 AA, p. 898.
Matthew, W. D. 1897 C, p. 398, footnote.
 1899 A, p. 32.
Roger, O. 1896 A, p. 166.
Trouessart, E. L. 1898 A, p. 725. (*P. nunenius*).
 Eocene (Wasatch); Wyoming.
- Phenacodus omnivorus* Cope.**
Cope, E. D. 1874 O, p. 11.
 1875 C, p. 18.
 1877 K, p. 178, pl. xlv, fig. 6.
 1882 E, p. 179.
 1884 O, p. 463.
Matthew, W. D. 1899 A, p. 32. (Syn. of *P. primævus*).
 Eocene (Wasatch); New Mexico.
- Phenacodus primævus* Cope.**
Cope, E. D. 1873 D, p. 3.
 1874 B, p. 458.
 1874 O, p. 10.
 1875 C, p. 18.
 1877 K, p. 174, pl. xlv, figs. 1-5.
 1881 D, p. 200. (*P. primævus*; *P. trilobatus*).
 1882 E, p. 178.
 1883 G, p. 563, pls. i, ii.
 1883 BB, pl. xii.
 1884 O, pp. 433, 435, pls. lvii b; lvii c; lvii d;
 lvii e; lvii h, figs. 1-16 (*P. primævus*); p.
 463, pl. lviii, fig. 11 (*P. trilobatus*).
 1884 AA, p. 893, figs. 15-19, pls. xxviii, xxix.
 1887 I, p. 657.
 1887 N, p. 987, fig. 1.
 1887 S, p. 270, figs. 47, 48; p. 273, fig. 51; p.
 275, pl. vii, figs. 3, 4.
 1889 U.
King, C. 1878 A, p. 376.
Matthew, W. D. 1899 A, pp. 32, 36.
Osborn, H. F. 1897 B.
 1898 G, pl. xii, text figs. 1-4.
 1898 Q, p. 11.
Osborn and Wortman 1892 A, pp. 83, 86.
Pavlow, M. 1887 A.
Roger, O. 1896 A, p. 166. (*P. primævus*, *P. trilo-*
batus).
Schlosser, M. 1886 B, p. 12. (*P. trilobatus*).
Scott, W. B. 1892 A, p. 427, fig. 12.
Trouessart, E. L. 1898 A, p. 725.
Wortman, J. L. 1883 A, p. 708, fig. 127.
Zittel, K. A. 1893 B, p. 219, figs. 151, 153, 159, 160.
 Eocene (Wasatch (Wind River)); Wyoming,
 New Mexico.

Phenacodus sucatatus Cope.*Cope, E. D.* 1874 O, p. 11.

1875 C, p. 18.

1877 K, p. 179, pl. xlv, fig. 7.

1882 E, p. 179.

Matthew, W. D. 1899 A, p. 32.

Roger, O. 1896 A, p. 166.

Eocene; New Mexico.

Phenacodus vortmani Cope.*Cope, E. D.* 1880 N, p. 747. (Hyracotherium.)

1881 D, p. 199.

1882 E, p. 179, 180. (P. vortmani, P. apternus.)

1884 O, pp. 433, 464, pls. lvii g; lvii h, fig. 17; lviii, figs. 8-10.

Cope, E. D. 1884 AA, p. 899, text figs. 20, 21, pl. xxx; p. 900, footnote. ("Trispondylus.")

1887 I, p. 657. (P. wortmani.)

1889 U.

Matthew, W. D. 1899 A, pp. 32, 36.

Nicholson and Lydekker 1889 A, p. 1382.

Osborn and Wortman 1892 A, p. 86.

Pavlov, M. 1887 A.

Roger, O. 1896 A, p. 166. (P. vortmani, P. apternus.)

Schlosser, M. 1886 B, p. 12.

Scott, W. B. 1892 A, p. 427, fig. 7.

Trouessart, E. L. 1898 A, p. 725. (P. wortmanni.)

Zittel, K. A. 1893 B, p. 219. (P. wortmani.)

Eocene (Wasatch, Wind River); Wyoming.

ECTOCION Cope. Type *Oligotomus osbornianus* Cope.*Cope, E. D.* 1882 X.

1884 O, pp. 694, 695.

1887 N, pp. 997, 1061.

Earle, C. 1892 C, p. 276. (Ectocium.)

Matthew, W. D. 1897 C, p. 301.

Wortman, J. L. 1883 A, p. 710. (Ectocium.)

1896 A, pp. 81, 83. (Ectocium.)

Zittel, K. A. 1893 B, p. 242. (Syn. of Eohippus.)

Ectocion osbornianum Cope.*Cope, E. D.* 1882 E, p. 182. (Oligotomus.)*Cope, E. D.* 1882 X.

1884 O, p. 696, pl. xxv e, figs. 9, 10.

1887 N, p. 1061, fig. 25.

Matthew, W. D. 1899 A, pp. 32, 36. (Phenacodus.)

Roger, O. 1896 A, p. 169. (Eohippus.)

Trouessart, E. L. 1898 A, p. 724.

Zittel, K. A. 1893 B, p. 242, fig. 177. (Eohippus.)

Eocene (Wasatch, Wind River); Wyoming.

MENISCOTHERIIDÆ.

Cope, E. D. 1882 R, p. 334.

Ameghino, F. 1897 A, p. 84.

Cope, E. D. 1882 F, p. 95.

1883 E.

1884 O, p. 384.

1884 AA, pp. 793, 901.

Matthew, W. D. 1897 C, p. 294.

Nicholson and Lydekker 1889 A, p. 1382.

Osborn, H. F. 1891 D, p. 911.

1892 C.

1893 F, p. 127.

Osborn and Earle, 1895 A, pp. 47, 49.

Roger, O. 1896 A, p. 167.

Pavlov, M. 1887 A.

Steinmann and Döderlein 1890 A, p. 751.

Zittel, K. A. 1893 B, p. 220.

MENISCOTHERIUM Cope. Type *M. chamense* Cope.*Cope, E. D.* 1874 O, p. 8.

1877 K, p. 251.

1881 G, p. 396.

1882 F, p. 97.

1882 R, p. 334.

1884 O, pp. 386, 493.

1884 AA, p. 901.

1886 K, p. 721.

1887 I, p. 657.

1887 N, p. 1018.

1892 S, p. 412.

Lydekker, R. 1889 B.

Marsh, O. C. 1892 D, p. 445.

Matthew, W. D. 1897 C, p. 309.

Nicholson and Lydekker 1889 A, pp. 1376, 1382.

Osborn, H. F. 1890 D, p. 532.

1891 D, p. 911.

1892 C.

1892 G, figs. 1-4.

1893 D, p. 43.

1893 F, p. 127.

Osborn and Wortman 1893 A, p. 16.

Pavlov, M. 1887 A.

Schlosser, M. 1885 A, p. 683.

1886 B, p. 21.

Scott, W. B. 1892 A, p. 429.

Wortman, J. L. 1886 A, p. 475.

1896 B, p. 262.

Zittel, K. A. 1893 B, p. 221.

Meniscotherium chamense Cope.*Cope, E. D.* 1874 O, p. 8.

1877 K, pp. 251, 252, pl. lxvi, fig. 18.

1884 AA, p. 904.

King, C. 1878 A, p. 376.

Marsh, O. C. 1892 D, p. 445.

Matthew, W. D. 1899 A, p. 32.

Roger, O. 1896 A, p. 167.

Trouessart, E. L. 1898 A, p. 726.

Eocene (Wasatch); New Mexico.

Meniscotherium tapiacitis Cope.*Cope, E. D.* 1882 C, p. 470.

1884 O, p. 506, pl. xxv f, fig. 15.

1884 AA, p. 905, fig. 26 b.

Matthew, W. D. 1899 A, p. 32.

Roger, O. 1896 A, p. 167.

Eocene (Wasatch); New Mexico.

Meniscotherium terrærubræ Cope.

Cope, E. D. 1881 H, p. 493.

1882 C, p. 470.

1884 O, p. 496, pls. xxv f, figs. 12-14; pl. xxv g.

1884 AA, p. 904, figs. 25-28.

Matthew, W. D. 1899 A, p. 32.

Pavlow, M. 1887 A, figs. 12 a, 12 b.

Roger, O. 1896 A, p. 167.

Trouessart, E. L. 1898 A, p. 726.

Zittel, K. A. 1893 B, p. 221, fig. 163.

Eocene (Wasatch); New Mexico.

HYRACOPS Marsh. Type *H. socialis* Marsh.

Marsh, O. C. 1892 D, p. 446.

Cope, E. D. 1892 S, p. 412. (Syn.? of *Meniscotherium*.)

Matthew, W. D. 1899 A, p. 32, footnote.

Osborn, H. F. 1892 G, p. 506, figs. 1, 2. (Syn. of *Meniscotherium*.)

Zittel, K. A. 1893 B, p. 221.

Hyracops socialis Marsh.

Marsh, O. C. 1892 D, p. 447, figures.

Matthew, W. D. 1899 A, p. 32.

Osborn, H. F. 1892 G, p. 506, figs. 1-4. (*Meniscotherium*.)

1893 F, p. 128, figs. 1, 2. (*Meniscotherium*.)

Roger, O. 1896 A, p. 167.

Trouessart, E. L. 1898 A, p. 726.

Woodward, A. S. 1898 B, p. 289.

Zittel, K. A. 1893 B, p. 221, fig. 162.

Eocene (Wasatch); New Mexico.

MIOCLÆNIDÆ.

Osborn and Earle 1895 A, pp. 48, 61.

Matthew, W. D. 1897 C, p. 311.

Roger, O. 1896 A, p. 163.

Scott, W. B. 1892 B, p. 322. (Not named.)

MIOCLÆNUS Cope. Type *M. turgidus* Cope.

Cope, E. D. 1881 H, pp. 487, 490, 491.

1881 U, p. 830.

1882 E, p. 187.

1882 K, p. 71.

1884 K, p. 312.

1884 O, pp. 259, 324.

1884 S, p. 349.

1888 D.

1888 CC, p. 319.

Earle, C. 1893 B, p. 377.

Major, Fors. 1893 A, p. 199.

Matthew, W. D. 1897 C, p. 312.

Osborn, H. F. 1888 E.

1888 F, p. 1067.

Osborn and Earle 1895 A, p. 48.

Osborn and Wortman 1892 A, p. 118.

Pavlow, M. 1887 A.

Schlosser, M. 1887 B, p. 320.

Scott, W. B. 1892 A, p. 413.

1892 B, p. 321.

1892 D, p. 90.

Steinmann and Döderlein 1890 A, p. 712.

Trouessart, E. L. 1898 A, p. 719.

Zittel, K. A. 1893 B, pp. 585, 588, 589.

Mioclænus acolytus Cope.

Cope, E. D. 1882 C, p. 462. (*Hyopsodus*.)

1882 C, p. 468. (*M. minimus*.)

1884 K, pp. 309, 312. (*M. minimus*.)

1884 O, pp. 235, 238, pl. xxiii d, figs. 5, 6 (*Hyopsodus*); pp. 325, 327, pl. xxv e, figs. 22-24 (*M. minimus*).

1884 S, p. 349. (*M. minimus*.)

1888 CC, p. 335.

Matthew, W. D. 1897 C, p. 317, fig. 18.

1899 A, p. 29.

Roger, O. 1896 A, p. 164. (*M. acolytus*, *M. minimus*.)

Schlosser, M. 1887 B, p. 221. (*M. minimus*.)

Scott, W. B. 1892 B, p. 323.

Trouessart, E. L. 1898 A, p. 719.

Eocene (Torrejon); New Mexico.

For Matthew's disposition of *M. minimus* see *Ellipsodon inæquidens*.

Mioclænus lemuroides Matth.

Matthew, W. D. 1892 C, p. 315, figs. 15, 16.

Cope, E. D. 1888 CC, p. 334. (*M. turgidunculus*, in part.)

Matthew, W. D. 1899 A, p. 29.

Trouessart, E. L. 1898 A, p. 719.

Eocene (Torrejon); New Mexico.

Mioclænus lydekkerianus Cope.

Cope, E. D. 1888 CC, p. 328. (Type specimen only, *vide* Matthew.)

Matthew, W. D. 1897 C, pp. 264, 312, 313.

1899 A, p. 29.

Roger, O. 1896 A, p. 166. (*Protogonodon*.)

Scott, W. B. 1892 B, p. 322. (*Protogonodon*.)

Trouessart, E. L. 1898 A, p. 719.

Eocene (Torrejon); New Mexico.

Mioclænus turgidunculus Cope.

Cope, E. D. 1888 CC, p. 334. (In part, *vide* Matthew.)

1888 CC, p. 334.

Matthew, W. D. 1897 C, pp. 264, 313.

1899 A, p. 28.

Roger, O. 1896 A, p. 164. (*Protogonodon*.)

Scott, W. B. 1892 B, p. 322.

Trouessart, E. L. 1898 A, p. 719.

Eocene (Puerco); New Mexico.

Mioclænus turgidus Cope.

Cope, E. D. 1881 U, p. 830.

1881 H, p. 489.

1884 K, p. 312.

1884 O, p. 325, pl. xxv e, figs. 19, 20; pl. lviii f, figs. 3, 4.

- Cope, E. D. 1884 S, p. 349, fig. 15.
1888 CC, p. 334. (M. zittelianus.)
Earle, C. 1893 B, p. 379.
Matthew, W. D. 1897 C, pp. 264, 312.
1899 A, p. 29.
Osborn and Earle 1895 A, p. 50, fig. 17.
Pavlow, M. 1887 A, fig. 8.

- Roger, O. 1896 A, p. 163 (M. turgidus); p. 164 (M. zittelianus).
Schlosser, M. 1887 B, p. 221.
Scott, W. B. 1892 B, p. 321. (M. turgidus, M. zittelianus.)
Trouessart, E. L. 1898 A, p. 719.
Eocene (Torrejon); New Mexico.

PROTOSELENE Matth. Type *Mioclænus opisthacus* Cope.

Matthew, W. D. 1897 C, p. 317.

Protoselene opisthaca (Cope).

- Cope, E. D. 1882 EE, p. 833. (Mioclænus.)
1882 C, p. 467. (Hemithlæus.)
1882 EE, p. 853. (Mioclænus baldwini.)
1884 K, p. 312. (Mioclænus opisthacus, M. baldwini.)
1884 O, p. 407, pl. xxv f, figs. 8, 9 (Hemithlæus); pp. 325, 328, pl. xxv f, fig. 16 (Mioclænus baldwini).

- Cope, E. D. 1888 CC, p. 332. (Mioclænus.)
Matthew, W. D. 1897 C, pp. 264, 317, figs. 19, 20.
1899 A, p. 29.
Roger, O. 1896 A, p. 164. (Mioclænus.)
Schlosser, M. 1887 B, p. 221. (Mioclænus baldwini.)
Trouessart, E. L. 1898 A, p. 720.
Eocene (Torrejon); New Mexico.

Suborder PERISSODACTYLA Owen.

- Owen, R. 1848 A, p. 131.
Branco, W. 1897 A, p. 18.
Burmeister, H. 1867 A, p. 237. (Imparidigitata.)
Cope, E. D. 1873 E, p. 562.
1873 F, p. 39.
1874 M.
1880 B, p. 457.
1881 G.
1881 I, p. 269.
1881 J.
1882 A.
1882 E, p. 177.
1882 Y.
1883 D. (Diplarthra, part.)
1884 O, pp. 379, 614 (Perissodactyla); pp. 167, 378, 613 (Diplarthra, part.)
1886 C, p. 615. (Diplarthra, part.)
1887 N.
1887 S.
1888 K, p. 163. (Diplarthra, part.)
1889 C, p. 148, *et seq.*
1889 R, p. 877.
1891 N, p. 84. (Diplarthra, part.)
1892 S.
1898 B, p. 125. (Diplarthra, part.)
Cope and Wortman 1884 A, p. 15.
Flower, W. H. 1876 B, xiii, p. 327.
1883 A.
1883 D, p. 427.
1885 A.
Flower and Lydekker 1891 A, p. 368.
Gadow, H. 1898 A, p. 46.
Gegenbaur, C. 1898 A.
Gill, T. 1872 A, p. 299.
1872 B, pp. 11, 71, 84.
Gruber, W. 1859 A.
Haeckel, E. 1895 A, p. 543.
Hay, O. P. 1899 F, p. 682.
Huxley, T. H. 1870 A, p. 440.
1872 A, p. 293.
Leidy, J. 1871 C, p. 356.
Leuthardt, F. 1891 A. (Mesaxonia.)
Lydekker, R. 1885 E, p. 469. (Diplarthra, part.)
1886 A, p. 1.

- Lydekker, R. 1891 B.
1896 B.
Marsh, O. C. 1884 F, p. 177. (Clinodactyla, Mesaxonia.)
1892 C, p. 349. (Mesaxonia.)
Nicholson and Lydekker 1889 A, p. 1382.
Osborn, H. F. 1890 D, pp. 505, 541, 559.
1893 A, p. 379.
1893 D.
1898 I, p. 79.
1900 C, p. 568.
Osborn and Wortman 1892 A.
Owen, R. 1845 B, p. 572. ("Isodactyle Ungulata.")
1857 A.
1866 B, p. 444.
1868 A, p. 352.
Pavli, S. 1900 A, p. 181.
Pavlow, M. 1887 A.
Roger, O. 1896 A, p. 168.
Röse, C. 1896 A.
Rütimeyer, L. 1865 A. (Imparidigitata.)
1888 A. (Diplarthra, part.)
Schlosser, M. 1885 A.
1886 A, p. 252.
1886 B.
1887 A.
1888 A.
1889 A.
1890 C.
1890 D.
1892 A.
Schmidt, O. 1886 A, p. 189.
Scott, W. B. 1892 A, p. 430.
Steinmann and Döderlein 1890 A, p. 765.
Tornier, G. 1888 A, p. 299.
Turner, H. N. 1848 A.
Weber, M. 1886 A, p. 226.
Wiedersheim, R. 1881 A, p. 360. (Perissodactyli.)
Woodward, A. S. 1898 B, p. 319.
Wortman, J. L. 1883 A, p. 706.
1885 A, p. 297. (Diplarthra, part.)
1893 B, p. 208. (Diplarthra, part.)
Zittel, K. A. 1893 B, pp. 224, 726.

Superfamily EQUOIDEA.

Gill, T. 1872 B, p. 87. (Solidungula.)

| Osborn, H. F. 1898 I, p. 79. (Hippoidea.)

EQUIDÆ.

Ameghino, F. 1889 A, p. 502.

1891 A.

Boule, M. 1899 A, p. 531. ("Équidés.")

Branco, W. 1897 A, p. 18.

Cope, E. D. 1874 M.

1881 G, pp. 378, 380, 400.

1881 O. (Equidæ, Anchitheriidae.)

1884 O, pp. 615, 715, 716.

1887 N.

1889 C.

1892 S.

1893 A.

Cope and Wortman 1884 A, p. 26.

Cornevin, C. 1882 A.

Cuvier, G. 1834 A, iii, pp. 193-220, with plates.

Ewart, J. C. 1894 A.

1894 B.

Farr, M. S. 1896 A.

Flower, W. H. 1876 B, xiii, p. 308.

1876 C, p. 109.

Flower and Lydekker 1891 A, p. 376.

Gadow, H. 1898 A, p. 47.

George, —. 1869 A.

Gervais, P. 1874 A.

Gray, J. E. 1869 A, p. 262.

Haeckel, E. 1895 A, p. 547. (Hippotherida.)

Huxley, T. H. 1870 A, p. 439.

1870 B, p. xlix.

1872 A, p. 295.

1876 B, xiv, p. 34.

1880 B, p. 649.

Klever, E. 1889 A.

Kowalevsky, W. 1873 B.

Leidy, J. 1869 A, p. 302. (>Anchitheriidae.)

1871 C, p. 359. (Equidae, Anchitheriidae.)

Lydekker, R. 1882 A.

1886 A, p. 49.

1886 D, p. 326.

1891 B.

Major, F. 1873 A, p. 109.

Major, F. 1877 A.

1880 A.

Marsh, O. C. 1877 E.

1892 C, p. 339.

Matthew, W. D. 1899 A, p. 22, *et seq.*

Nicholson and Lydekker 1889 A, p. 1359.

Osborn, H. F. 1893 D, p. 37.

1898 I, p. 79.

Osborn and Wortman 1892 A, p. 123.

Owen, R. 1845 B, p. 572.

1870 B.

1878 C, p. 218.

Pavlow, M. 1888 A, p. 134.

1890 A.

Ridewood, W. G. 1895 A.

Roger, O. 1889 A.

1896 A, p. 168.

Rütimeyer, L. 1862 A.

1875 A.

1888 A, p. 16.

Ryder, J. 1877 A.

Schlosser, M. 1886 A. (Hippidae.)

1886 B.

Schmidt, O. 1886 A, p. 201.

Scott, W. B. 1886 B.

1891 B.

1895 C, p. 78.

Slade, D. D. 1893 A.

Steinmann and Döderlein 1890 A, p. 778.

Tornier, G. 1888 A, p. 301.

Trouessart, E.-L. 1898 A, p. 783.

Tscherski, J. D. 1892 A, p. 257.

Weyhe, —. 1875 A, p. 121.

Wilckens, M. 1884 A.

1884 B.

1885 A.

1888 A.

Woodward, A. S. 1898 B, p. 337.

Wortman, J. L. 1882 B.

Zittel, K. A. 1893 B, pp. 231, 259.

HYRACOTHERIIDÆ.

Branco, W. 1897 A, p. 18.

Cope, E. D. 1881 G, p. 381.

1884 O, p. 618.

1886 K. (Hyracotheriidae.)

1887 N, p. 994.

1889 C, p. 162 *et seq.*

Haeckel, E. 1895 A, p. 548. (Hyracotherida.)

Marsh, O. C. 1892 C, p. 352. (>Orohippidae.)

Osborn, H. F. 1893 D, p. 37. (Systemodontinæ, in part.)

Osborn and Wortman 1892 A, p. 93.

Roger, O. 1896 A, p. 168.

Rütimeyer, L. 1888 A, p. 27.

Steinmann and Döderlein 1890 A, p. 769. (Hyracotheriidae.)

Wortman, J. L. 1896 A.

Wortman and Earle 1893 A. (Systemodontinæ, in part.)

Zittel, K. A. 1893 B, p. 239.

Eohippus Marsh. Type *E. validus* Marsh.

Marsh, O. C. 1876 H, p. 401.

Since many writers regard Marsh's genus *Eohippus* as a synonym, or at most a subgenus of *Hyracotherium* Owen, and refer to the American species under the latter name, the literature of both genera is included in the following citations. Unless otherwise indicated the authors in this list employ the term *Hyracotherium*.

Ameghino, F. 1896 A, p. 410.

Cope, E. D. 1877 K, p. 258.

1881 G, p. 381.

1881 Y. (Systemodon, type *Hyracotherium tapirinum*.)

1883 B, p. 275.

1884 O, pp. 618, 624. (Hyracotherium, Systemodon.)

1886 K. (Hyracotherium, Systemodon.)

- Cope, E. D. 1887 I.
 1887 N, p. 994 (Hyracotherium, Systemodon.)
 1889 C.
 1892 S, p. 411.
 Earle, C. 1893 C p. 393. (Hyracotherium, Systemodon.)
 1896 A.
 Flower and Lydekker 1891 A, pp. 373, 374. (Hyracotherium, Systemodon.)
 Kowalevsky, W. 1873 A, p. 205.
 Landois, — 1881 A, p. 127.
 Leuthardt, F. 1891 A. (Hyracotherium.)
 Lydekker, R. 1886 A, p. 10.
 1886 D, p. 326.
 Marsh, O. C. 1877 E, p. 358.
 1879 D, p. 504.
 1892 C, p. 351. (Eohippus, Hyracotherium.)
 1898 E, p. 568.
 Matthew, W. D. 1897 C, p. 309.
 1899 A, p. 33.
 Nicholson and Lydekker 1889 A, pp. 1356, 1380. (Hyracotherium, Systemodon.)
 Owen, R. 1844 A, p. 226.
 1857 C, p. 65.
 Osborn, H. F. 1890 A.
 1890 B, p. 274.
 1890 D, p. 505.
 1893 D.
 Osborn and Wortman 1892 A, pp. 83, 93 (Hyracotherium); p. 124 (Systemodon).
 Pavlow, M. 1887 A, p. 350.
 1888 A. (Eohippus, Systemodon.)
 1900 A, p. 46.
 Rüttimeyer, L. 1862 A, p. 577.
 1891 A, p. 45.
 Schlosser, M. 1886 A, pp. 252, 432. (Hyracotherium, Systemodon.)
 1886 B. (Hyracotherium, Eohippus, Systemodon.)
 1887 A.
 Scott, W. B. 1886 B.
 1892 A, p. 430. (Systemodon.)
 Steinmann and Döderlein 1890 A, p. 770.
 Tomes, C. S. 1898 A, p. 412. (Hyracotherium.)
 Trouessart, E. L. 1898 A, p. 770 (Hyracotherium); p. 771 (Eohippus, subgenus); p. 772 (Pliolophus, subgenus).
 Wilckens, M. 1885 B, p. 210.
 Woodward, A. S. 1898 B, p. 323.
 Wortman, J. L. 1882 B, vi, p. 68.
 1883 A, p. 709.
 1886 A, p. 477. (Hyracotherium, Eohippus.)
 1893 B.
 1896 A. (Hyracotherium, Systemodon.)
 Wortman and Earle, 1893 A. (Hyracotherium, Systemodon.)
 Zittel, K. A. 1893 B, p. 239 (Hyracotherium); p. 277 (Systemodon).

Eohippus craspedotus (Cope).

- Cope, E. D. 1880 N, p. 747. (Hyracotherium.)
 1881 D, p. 199. (Hyracotherium.)
 1882 E, p. 186. (Hyracotherium.)
 1884 O, p. 631, pl. lviii, figs. 1, 2. (Hyracotherium.)
 1887 I, p. 658. (Hyracotherium.)

- Matthew, W. D. 1899 A, p. 36. (Hyracotherium.)
 Roger, O. 1896 A, p. 169. (Hyracotherium.)
 Trouessart, E. L. 1898 A, p. 771. [Hyracotherium (Eohippus).]
 Wortman, J. L. 1896 A, p. 97, pl. ii, fig. M, text fig. 7. (Hyracotherium.)
 Eocene (Wind River); Wyoming.

Eohippus cristatus (Wort.).

- Wortman, J. L. 1896 A, p. 96, pl. ii, fig. H; text fig. 6. (Hyracotherium.)
 Matthew, W. D. 1899 A, p. 33. (Hyracotherium.)
 Trouessart, E. L. 1898 A, p. 771. [Hyracotherium (Eohippus).]
 Eocene (Wasatch); Wyoming.

Eohippus index (Cope).

- Cope, E. D. 1873 D, p. 4. (Orotherium.)
 Allen, H. 1886 B. (Hyracotherium cuspidatum, Pliolophus vintanus.)
 Cope, E. D. 1873 U, p. 3. (Orotherium vasaccienne.)
 1874 B, p. 459. (Orotherium.)
 1875 C, p. 20 (Orohippus index); p. 18 (Orotherium vintanus); pp. 20, 21 (Orohippus angustidens); p. 22 (O. cuspidatus).
 1877 K, p. 262 (Orohippus index); p. 255, pl. lxx, figs. 1-12 (Orotherium vintanus); pp. 262, 265, pl. lxxvi, figs. 1-6 (Hyracotherium angustidens); pp. 262, 267, pl. lxxv, fig. 18 (Hyracotherium cuspidatum); p. 264, pl. lxxvi, figs. 7-11 (Hyracotherium vasaccienne).
 1880 N, p. 747. (Hyracotherium angustidens, H. vasaccienne.)
 1881 D, p. 198. (Hyracotherium angustidens.)
 1882 E, p. 186 (Hyracotherium angustidens, H. vasaccienne, H. venticolus); pp. 179, 181, pl. xxv e, fig. 17, premolars (Phenacodus laticeuneus).
 1884 O, pp. 630, 650 (Hyracotherium index); pp. 630, 648, pl. xlix a, fig. 16 (Hyracotherium angustidens); p. 631 (Hyracotherium cuspidatum); pp. 630, 634 (Hyracotherium vasaccienne, in part).
 King, C. 1878 A, p. 377. (Eohippus angustidens, E. cuspidatus.)
 Lydekker, R. 1886 A, p. 12, fig. 3. (Hyracotherium angustidens.)
 Matthew, W. D. 1899 A, p. 30, footnote; p. 33. (Hyracotherium.)
 Pavlow, M. 1888 A, pl. i, fig. 10. (Hyracotherium angustidens.)
 Roger, O. 1896 A, p. 169 (Hyracotherium angustidens); p. 171 (Epihippus cuspidatus).
 Trouessart, E. L. 1898 A, p. 771 [Hyracotherium (Eohippus)]; p. 776 (Epihippus).
 Wortman, J. L. 1896 A, p. 99, pl. ii, fig. L; text figs. 9, 10. (Hyracotherium.)
 Eocene (Wasatch); New Mexico, Wyoming.

Eohippus pernix Marsh.

- Marsh, O. C. 1876 H, p. 402.
 King, C. 1878 A, p. 377.
 Marsh, O. C. 1892 C, p. 349, figs. 14, 15.
 Matthew, W. D. 1899 A, p. 33. (Syn. of Hyracotherium index.)

- Pavlow, M. 1888 A, p. 145.
 Roger, O. 1896 A, p. 169.
 Trouessart, E. L. 1898 A, p. 772. [Hyracotherium (Eohippus).]
 Wortman, J. L. 1896 A, p. 82. (Syn.? of Hyracotherium index.)
 Eocene (Wasatch); Wyoming.

Eohippus tapirinus (Cope).

- Cope, E. D. 1875 C, p. 20. (Orohippus.)
 1877 K, p. 263, pl. lxvi, figs. 12-16. (Hyracotherium.)
 1881 Y. (Systemodon.)
 1882 E, p. 183. (Systemodon.)
 1884 O, p. 619, pl. lvi, figs. 1, 2. (Systemodon.)
 1887 N, p. 999, fig. 8. (Systemodon.)
 Hay, O. P. 1899 A, p. 593. (Hyracotherium.)
 King, C. 1878 A, p. 377.
 Matthew, W. D. 1899 A, p. 33. (Hyracotherium.)
 Osborn and Wortman 1892 A, p. 125, fig. 17, only part, if any. (Systemodon.)
 Pavlow, M. 1888 A, p. 174. (Systemodon.)
 Roger, O. 1896 A, p. 183. (Systemodon.)
 Scott, W. B. 1892 A, p. 430. (Systemodon.)
 Trouessart, E. L. 1898 A, p. 771. [Hyracotherium (Eohippus).]
 Woodward, A. S. 1898 B, p. 323, fig. 183.
 Wortman, J. L. 1896 A, p. 94, pl. ii, fig. K, text figs. 4, 5. (Hyracotherium.)

- Wortman and Earle 1893 A, p. 170. (Systemodon.)
 Eocene (Wasatch); Wyoming, New Mexico.

Eohippus validus Marsh.

- Marsh, O. C. 1876 H, p. 401.
 King, C. 1878 A, p. 377.
 Matthew, W. D. 1899 A, p. 33. (Syn. of E. vasacciensis.)
 Roger, O. 1896 A, p. 169.
 Trouessart, E. L. 1898 A, p. 772. [Hyracotherium (Eohippus).]
 Wortman, J. L. 1896 A, p. 82. (Syn.? of Hyracotherium vasacciensis.)
 Eocene (Wasatch); New Mexico.

Eohippus vasacciensis (Cope).

- Cope, E. D. 1872 O, p. 474. (Notharctus.)
 1872 E, p. 471. (Notharctus vasachiensis.)
 1873 E, pp. 606, 646. (Orotherium.)
 1873 U, p. 3. (Orotherium.)
 1875 C, p. 21. (Orohippus.)
 1884 O, p. 634. (Hyracotherium.)
 King, C. 1878 A, p. 376. (Orohippus.)
 Matthew, W. D. 1899 A, p. 33. (Hyracotherium.)
 Roger, O. 1896 A, p. 169.
 Trouessart, E. L. 1898 A, p. 771. [Hyracotherium (Eohippus).]
 Wortman, J. L. 1896 A, p. 98, pl. ii, fig. G; text fig. 8. (Hyracotherium.)
 Eocene (Wasatch); Wyoming.

PLIOLOPHUS Owen. Type *P. vulpiceps* Owen.

- Owen, R. 1857 C, p. 54, pls. ii-iv.
 Cope, E. D. 1881 G, p. 381.
 1884 O, pp. 618, 650.
 1887 N, pp. 994, 997.
 1892 S, p. 411.
 Earle, C. 1896 A.
 Owen, R. 1860 E, p. 326.
 Wortman, J. L. 1896 A, pp. 83, 102.
 Zittel, K. A. 1893 B, pp. 239, 243. (Syn. of Hyracotherium.)

It is doubtful whether the American species belong to this genus or to *Eohippus*; indeed, the genus itself is of doubtful validity.

Pliolophus cristonensis Cope.

- Cope, E. D. 1877 K, p. 254, pl. lxv, figs. 13, 14. (Orotherium.)
 1875 C, pp. 20, 21. (Orohippus major, not of Marsh.)
 1877 K, p. 257, pl. lxv, figs. 15-17. (Orotherium lœvii.)

- Cope, E. D. 1884 O, p. 651. (P. cristonensis, P. lœvii.)
 Matthew, W. D. 1899 A, p. 33. (Hyracotherium.)
 Roger, O. 1896 A, p. 170. (Pachynolophus.)
 Trouessart, E. L. 1898 A, p. 772. [Hyracotherium (Pliolophus).]
 Wortman, J. L. 1896 A, p. 102, pl. ii, figs. i, i', text figs. 11, 12. [Hyracotherium (Pliolophus).]
 Zittel, K. A. 1893 B, p. 243, fig. 180. (Pachynolophus.)
 Eocene (Wasatch); New Mexico, Wyoming.

Pliolophus montanus Wort.

- Wortman, J. L. 1896 A, p. 103, pl. ii, fig. J; text fig. 13. [Hyracotherium (Pliolophus).]
 Matthew, W. D. 1899 A, p. 33.
 Trouessart, E. L. 1898 A, p. 772. [Hyracotherium (Pliolophus).]
 Eocene (Wasatch); Wyoming.

PROTOROHIPPIUS Wortman. Type *Hyracotherium venticolum* Cope.

- Wortman, J. L. 1896 A, pp. 91, 104.
 Osborn, H. F. 1897 G, p. 258.
Protorohippus venticolum (Cope).
 Cope, E. D. 1881 D, p. 198. (Hyracotherium.)
 Unless otherwise indicated, the following authors refer this species to *Hyracotherium*.
 Cope, E. D. 1884 O, pp. 630, 635, pl. xlix a, figs. 1-15; pls. xlix b, xlix c.

- Cope, E. D. 1887 N, p. 995, pl. xxx, text figs. 5-7.
 1887 S, p. 270, pl. vi, figs. 1, 2.
 1888 T.
 1889 C, p. 159.
 Matthew, W. D. 1899 A, p. 36. (Protorohippus.)
 Osborn, H. F. 1896 C, p. 708, illus. 4.
 1898 Q, pp. 10, 15.
 Pavlow, M. 1887 A.
 1888 A, p. 114, pl. i, figs. 1, 9.

- Roger, O. 1896 A, p. 168.
 Rüttimeyer, L. 1888 A, p. 15.
 Schlosser, M. 1886 B, pl. v, fig. 32; pl. vi, fig. 34.
 (Hyracotherium.)
 Woodward, A. S. 1898 B, p. 324, fig. 184. (Hyracotherium.)

- Wortman, J. L. 1883 A, p. 709, figs. 128-130.
 1896 A, p. 105, pl. ii, fig. N; text figs. 14. 15.
 (Protorohippus.)
 Zittel, K. A. 1893 B, p. 240, figs. 174, 175.
 Eocene (Wind River); Wyoming, Colorado.

HELOHIPPIUS Marsh. Type *Lophiodon pumilus* Marsh.

Marsh, O. C. 1892 C, p. 353.

Helohippus pumilus Marsh.

- Marsh, O. C. 1871 D, p. 38. (Lophiodon.)
 Leidy, J. 1872 B, p. 362. (Lophiodon.)

- Leidy, J. 1872 C, p. 20. (Lophiodon.)
 Marsh, O. C. 1892 C, p. 353.
 Matthew, W. D. 1899 A, p. 45.
 Roger, O. 1896 A, p. 169.
 Eocene (Bridger); Wyoming.

OROHIPPUS Marsh. Type *O. pumilis* Marsh.

Marsh, O. C. 1872 I, p. 207.

Cope, E. D. 1872 N, p. 466. (Helotherium, type *H. procyoninus*.)

1873 E, p. 606 (Orohippus); p. 607 (Oligotomus).

1873 U, p. 2. (Oligotomus, type *O. cinctus*.)

1874 M. (Syn. of Hipposus.)

1875 C, pp. 13, 18, 20 (Orotherium); p. 19 (Orohippus).

1877 K, p. 258 (Syn. of Hyracotherium); p. 252 (Orotherium).

1887 N, pp. 997, 1074. (Syn. of Pliolophus.)
 1892 S, p. 411.

Dana, J. D. 1896 A, p. 913, fig. 1540.

Farr, M. S. 1896 A, p. 157. (Syn. of Pachynolophus.)

Flower, W. H. 1876 B, xiii, p. 327.

Flower and Lydekker 1891 A, p. 374. (Syn. of Pachynolophus.)

Gaudry, A. 1878 B, p. 142.

Huxley, T. H. 1876 B, xiv, p. 34.

1876 C, p. 294.

Landois, — 1881 A, p. 128.

Leidy, J. 1871 C, p. 358. (Lophiotherium.)

1873 B, p. 69. (Lophiotherium.)

Lydekker, R. 1886 A, p. 10. (Syn. of Hyracotherium.)

Marsh, O. C. 1872 I, p. 217. (Orotherium, type *O. wintanum*.)

1873 H, p. 407.

1874 B, p. 247.

1874 D, p. 66.

1876 G.

1877 E.

1879 D, p. 504.

1892 C, p. 348.

1898 E, p. 568.

Nicholson and Lydekker 1889 A, p. 1356.

Osborn, H. F. 1890 D, p. 506. (Syn. of Pliolophus.)

Osborn, Scott, and Speir 1878 A, p. 17 (Oligotomus); p. 24 (Orohippus).

Schlosser, M. 1886 B, p. 13. (Orotherium.)

Scott, W. B. 1891 B, p. 302.

Tomes, C. S. 1898 A, p. 415.

Weithofer, A. 1888 A, p. 278.

Wortman, J. L. 1883 A, p. 709. (Syn. of Hyracotherium.)

1896 A, pp. 92, 93, 108, fig. 18; pl. ii, fig. E.

Zittel, K. A. 1893 B, p. 242. (Syn. of Pachynolophus.)

Orohippus agilis Marsh.

Marsh, O. C. 1873 H, p. 407.

Cope, E. D. 1875 C, p. 22.

1877 K, p. 267. (Hyracotherium.)

Gaudry, A. 1878 B, p. 143.

King, C. 1878 A, p. 404.

Marsh, O. C. 1874 B, pp. 248, 255, figure.

1892 C, p. 349, figs. 16, 17.

Matthew, W. D. 1899 A, p. 45.

Osborn, H. F. 1890 D, p. 506. (Epihippus.)

Roger, O. 1896 A, p. 171. (Epihippus.)

Trouessart, E. L. 1898 A, p. 777. (Epihippus.)

Eocene (Bridger); Wyoming; Eocene (Uinta);
 New Mexico.

Orohippus ballardi (Marsh).

Marsh, O. C. 1871 D, p. 39. (Lophiotherium.)

Leidy, J. 1872 B, p. 365. (Lophiotherium.)

Marsh, O. C. 1872 I, p. 217. (Lophiotherium.)

Roger, O. 1896 A, p. 170. (Pachynolophus.)

Eocene (Bridger); Wyoming.

Orohippus cinctus (Cope).

Cope, E. D. 1873 U, p. 2. (Oligotomus.)

1873 E, p. 607. (Oligotomus.)

1884 O, p. 653, pl. xxiv, fig. 26. (Pliolophus.)

Matthew, W. D. 1899 A, p. 45. (Oligotomus.)

Osborn, Scott, and Speir 1878 A, p. 17. (Oligotomus.)

Roger, O. 1896 A, p. 170. (Pachynolophus.)

Trouessart, E. L. 1898 A, p. 774.

Wortman, J. L. 1896 A, p. 103.

Eocene (Bridger); Wyoming.

Orohippus major Marsh.

Marsh, O. C. 1874 B, p. 248.

Matthew, W. D. 1899 A, p. 45.

Osborn, H. F. 1890 D, p. 544, figures. (Pliolophus.)

Osborn, Scott, and Speir 1878 A, p. 24, pl. ix, figs. 1-7. (Identification doubtful.)

Trouessart, E. L. 1898 A, p. 772.

Eocene (Bridger); Wyoming.

Orohippus osbornianus (Cope).

Cope, E. D. 1884 O, pp. 630, 647, pl. xxiv, fig. 23.
 (Hyracotherium.)

1873 E, p. 607. (Orotherium sylvaticum, not
 Lophiotherium sylvaticum of Leidy.)

- Cope, E. D. 1873 U, p. 2. (*Orotherium sylvaticum*.)
 1877 K, p. 262. (*Hyracotherium sylvaticum*.)
 Matthew, W. D. 1899 A, p. 45. (*Hyracotherium*.)
 Roger, O. 1896 A, p. 169. (*Hyracotherium*.)
 Trouessart, E. L. 1898 A, p. 774.
 Eocene (Bridger); Wyoming.

Orohippus procyoninus Cope.

- Cope, E. D. 1872 N, p. 466. (*Helotherium*.)
 1873 E, p. 606.
 1875 C, pp. 20, 22.
 1877 K, pp. 262, 266. (*Hyracotherium*.)
 1884 O, pp. 631, 711, pl. xxiv, fig. 22. (*Lambdotherium*.)
 1887 S, p. 45. (*Lambdotherium*.)
 Marsh, O. C. 1873 K, p. 249. (Syn.? of *O. pumilis*.)
 Matthew, W. D. 1899 A, p. 45. (*Hyracotherium*.)
 Roger, O. 1896 A, p. 193. (*Lambdotherium*.)
 Eocene (Bridger); Wyoming.

Orohippus pumilis Marsh.

- Marsh, O. C. 1872 I, p. 207.
 Cope, E. D. 1873 E, p. 606. (Syn. of *O. procyoninus*.)
 1875 C, p. 22. (Syn. of *O. procyoninus*.)
 1877 K, p. 266. (Syn.? of *Hyracotherium procyoninum*.)

- Marsh, O. C. 1874 B, p. 249.
 Matthew, W. D. 1899 A, p. 45.
 Osborn, Scott, and Speir 1878 A, p. 24.
 Roger, O. 1896 A, p. 170. (*Pachynolophus*.)
 Trouessart, E. L. 1898 A, p. 773.
 Eocene (Bridger); Wyoming.

Orohippus sylvaticus (Leidy).

- Leidy, J. 1870 T, p. 126. (*Lophiotherium*.)
 Cope, E. D. 1884 O, pp. 631, 647, 652. (*Pliolophus*.)
 Leidy, J. 1871 C, p. 358. (*Lophiotherium*.)
 1872 B, p. 364. (*Lophiotherium*.)
 1873 B, pp. 69, 327, pl. vi, figs. 33-35. (*Lophiotherium*.)
 Matthew, W. D. 1899 A, p. 45.
 Roger, O. 1896 A, p. 170. (*Pachynolophus*.)
 Trouessart, E. L. 1898 A, p. 773.
 Eocene (Bridger); Wyoming.

Orohippus uintanus (Marsh).

- Marsh, O. C. 1872 I, p. 217. (*Orotherium*.)
 Cope, E. D. 1881 D, p. 199. (*Orotherium*.)
 1884 O, p. 651. (*Pliolophus uintanus*.)
 Matthew, W. D. 1899 A, p. 45.
 Roger, O. 1896 A, p. 170. (*Pachynolophus*.)
 Trouessart, E. L. 1898 A, p. 777, in part. (*Epihippus uintensis*.)
 Eocene (Bridger); Wyoming.

EPIHIPPIUS Marsh. Type *E. gracilis* Marsh.

- Marsh, O. C., 1878, Pop. Sci. Month., p. 678.
 Cope, E. D. 1887 N, pp. 1061, 1063.
 1890 C, p. 470.
 1892 S, p. 411.
 Flower and Lydekker 1891 A, p. 374.
 Marsh, O. C. 1879 D, p. 504. (No definition.)
 1892 C, p. 353.
 1898 E, p. 568.
 Matthew, W. D. 1899 A, p. 49.
 Nicholson and Lydekker 1891 A, p. 1358.
 Osborn, H. F. 1890 D, pp. 506, 529.
 Schlosser, M. 1886 B, p. 14.
 Steinmann and Döderlein 1890 A, p. 780.
 Wortman, J. L. 1896 A, p. 92.
 Zittel, K. A. 1893 B, p. 244.

Epihippus gracilis Marsh.

- Marsh, O. C. 1871 D, p. 38. (*Anchitherium*.)
 1878, in King, C. 1878 A, p. 407.
 1874 B, p. 249. (*Orohippus*.)

- Matthew, W. D. 1899 A, p. 49.
 Roger, O. 1896 A, p. 171 (*Epihippus*); p. 174 (*Mesohippus*?).
 Scott and Osborn 1887 A, p. 259.
 Trouessart, E. L. 1898 A, p. 777 (*Epihippus*); p. 781 (*Mesohippus*.)
 Eocene (Uinta); Utah.

Epihippus uintensis Marsh.

- Marsh, O. C. 1875 B, p. 247. (*Orohippus*.)
 1878, in King, C. 1878 A, p. 407.
 Matthew, W. D. 1899 A, p. 49.
 Osborn, H. F. 1890 D, p. 529, pl. xi, figs. 3, 5.
 1895 A, p. 98.
 Roger, O. 1896 A, p. 171.
 Scott and Osborn 1887 A, p. 259.
 Trouessart, E. L. 1898 A, p. 777, in part.
 Zittel, K. A. 1893 B, p. 245, fig. 184.
 Eocene (Uinta); Utah.

MIOHIPPIUS Marsh. Type *M. annectens* Marsh.

- Marsh, O. C. 1874 B, p. 249.
 Ameghino, F. 1896 A, p. 442. (*Mesohippus*.)
 Cope, E. D. 1874 B, p. 496. (*Anchitherium*.)
 1881 G, p. 399. (*Mesohippus*.)
 1884 O, p. 714. (*Anchitherium*.)
 1887 N, p. 1067. (*Mesohippus*.)
 1892 S, p. 412. (*Miohippus*.)
 1894 D, p. 791. (*Mesohippus*, *Miohippus*.)
 Dana, J. D. 1896 A, p. 913, fig. 1540. (*Miohippus*, *Mesohippus*.)
 Farr, M. S. 1896 A, p. 150. (*Mesohippus*.)
 Huxley, T. H. 1876 C, pp. 292, 294. (*Miohippus*, *Mesohippus*.)

- Landois, — 1881 A, p. 128 (*Protohippus*); p. 29 (*Mesohippus*.)
 Lydekker, R. 1886 A, p. 45. (*Mesohippus*.)
 Marsh, O. C. 1874 D, p. 66. (*Miohippus*.)
 1875 B, p. 248. (*Mesohippus*, type *Anchitherium bairdi*.)
 1876 G, p. 61. (*Mesohippus*.)
 1877 E, p. 359. (*Miohippus*, *Mesohippus*.)
 1879 D, p. 504. (*Miohippus*, *Mesohippus*.)
 1892 C, p. 354. (*Miohippus*, *Mesohippus*.)
 1898 E, p. 568. (*Miohippus*, *Mesohippus*.)
 Nicholson and Lydekker 1889 A, p. 1358 (*Mesohippus*); p. 1359 (*Miohippus*.)

- Osborn, H. F. in Scott and Osborn 1890 B, p. 87. (Mesohippus.)
 Osborn and Wortman 1895 A, p. 352. (Mesohippus.)
 Pavlow, M. 1888 A. (Mesohippus.)
 Schlosser, M. 1886 B, p. 14. (Miohippus and Mesohippus, syns. of Anchitherium.)
 Scott, W. B. 1886 B. (Miohippus, Mesohippus.)
 1891 B. (Mesohippus.)
 1893 B, p. 660. (Miohippus, Mesohippus.)
 1895 C, p. 79. (Miohippus, Mesohippus.)
 Scott and Osborn 1887 B, p. 171. (Mesohippus.)
 1890 B, p. 87. (Mesohippus.)
 Steinmann and Döderlein 1890 A, p. 781. (Mesohippus.)
 Tones, C. S. 1898 A, p. 415.
 Weithofer, A. 1888 A, p. 278.
 Woodward, A. S. 1898 B, p. 328. (Mesohippus.)
 Wortman, J. L. 1883 A, p. 710. (Anchitherium.)
 1893 A. (Mesohippus.)
 Zittel, K. A. 1893 B, p. 249. (Mesohippus.)

Miohippus agrestis (Leidy).

- Leidy, J.* 1873 B, pp. 251, 323, pl. vii, figs. 16, 17. (Anchitherium.)
Cope, E. D. 1874 B, p. 498. (Anchitherium.)
Matthew, W. D. 1899 A, p. 56. (Syn. of Anchippus texanus.)
Roger, O. 1896 A, p. 174. (Mesohippus.)
Trouessart, E. L. 1898 A, p. 781. (Mesohippus.)
 Miocene; Montana.

Miohippus anceps Marsh.

- Marsh, O. C.* 1874 B, p. 250. (Anchitherium.)
Cope, E. D. 1886 H, p. 368. (Syn.? of Anchitherium equiceps.)
King, C. 1878 A, p. 424.
Marsh, O. C. 1892 C, p. 350, figs. 20, 21.
Matthew, W. D. 1899 A, p. 63. (Mesohippus.)
Roger, O. 1896 A, p. 174.
Scott, W. B. 1893 B, p. 659.
 1895 C, p. 113.
Trouessart, E. L. 1898 A, p. 781.
Zittel, K. A. 1893 B, p. 250, fig. 194. (Anchitherium.)
 Miocene (John Day); Oregon.

Miohippus annectens Marsh.

- Marsh, O. C.* 1874 B, p. 249.
King, C. 1878 A, p. 424.
Marsh, O. C. 1894 F, p. 91.
Matthew, W. D. 1899 A, pp. 56, 63. (Mesohippus.)
Roger, O. 1896 A, p. 174.
Scott, W. B. 1893 B, p. 659.
 1895 C, p. 80, pl. i, figs. 6-8. (M. annectens.)
Trouessart, E. L. 1898 A, p. 781.
 Oligocene? (White River); Montana?: Miocene (John Day); Oregon.

Miohippus australis (Leidy).

- Leidy, J.* 1873 B, pp. 250, 323, pl. xx, fig. 19. (Anchitherium.)
Cope, E. D. 1893 A, p. 23. (Anchitherium.)
Matthew, W. D. 1899 A, p. 69. (Syn. of Anchippus texanus.)
Roger, O. 1896 A, p. 174. (Mesohippus.)
Trouessart, E. L. 1898 A, p. 781. (Mesohippus.)
 Miocene (Loup Fork); Texas.

Miohippus bairdi (Leidy).

- Leidy, J.* 1850 C, p. 122. (Palaeotherium.)
Cope, E. D. 1873 CC, p. 14. (Anchitherium.)
 1874 B, p. 496. (Anchitherium.)
 1879 D, p. 75. (Anchitherium.)
Farr, M. S. 1896 A, pl. xiii, text figs. 1-4. (Mesohippus.)
Hayden, F. V. 1858 B, p. 158. (Anchitherium.)
King, C. 1878 A, p. 412. (Mesohippus.)
Leidy, J. 1852 J, p. 572. (Anchitherium.)
 1852 L, p. 64. (Palaeotherium.)
 1854 A, p. 67, pl. x, figs. 14-21; pl. xi. (Anchitherium.)
 1869 A, pp. 333, 402, pl. xx. (Anchitherium.)
 1870 P, p. 112. (Anchitherium.)
 1871 C, p. 362. (Anchitherium.)
 1873 B, pp. 218, 322, pl. vii, fig. 15. (Anchitherium.)
Lydekker, R. 1886 A, p. 49. (Anchitherium.)
Marsh, O. C. 1874 B, p. 250. (Anchitherium.)
 1875 B, p. 248. (Mesohippus.)
Matthew, W. D. 1899 A, p. 55. (Mesohippus.)
Nicholson and Lydekker 1889 A, p. 1359. (Mesohippus.)
Osborn, H. F. 1896 B, p. 174. (Titanotherium.)
Osborn and Wortman 1894 A, p. 213. (Mesohippus.)
 1895 A, p. 353. (Mesohippus.)
Pavlow, M. 1888 A, p. 148, pl. i, figs. 4, 13. (Anchitherium.)
Roger, O. 1896 A, p. 173. (Mesohippus.)
Scott, W. B. 1891 B, pls. xxii, xxiii.
Scott and Osborn 1887 B, p. 171. (Mesohippus.)
 1890 B, p. 87, figs. 10, 11. (Mesohippus.)
Trouessart, E. L. 1898 A, p. 780. (Mesohippus.)
Zittel, K. A. 1893 B, p. 250, fig. 191. (Mesohippus.)
 Oligocene (White River); South Dakota, Nebraska, Colorado, Oregon?

Miohippus brachylophus (Cope).

- Cope, E. D.* 1879 D, p. 74. (Anchitherium.)
 1879 B, p. 58. (Anchitherium.)
 1894 D. (Anchitherium or Miohippus.)
Matthew, W. D. 1899 A, p. 63. (Mesohippus.)
Roger, O. 1896 A, p. 174.
Trouessart, E. L. 1898 A, p. 781.
 Miocene (John Day); Oregon.

Miohippus celer Marsh.

- Marsh, O. C.* 1874 B, p. 251. (Anchitherium.)
Cope, E. D. 1874 B, p. 497. (Anchitherium.)
King, C. 1878 A, p. 412. (Mesohippus.)
Marsh, O. C. 1875 B, p. 248. (Mesohippus.)
 1892 C, p. 350, figs. 18, 19. (Mesohippus.)
 1897 C, p. 524, fig. 101.
Matthew, W. D. 1899 A, p. 56. (Mesohippus.)
Osborn and Wortman 1895 A, p. 353. (Mesohippus.)
Roger, O. 1896 A, p. 174.
Trouessart, E. L. 1898 A, p. 780. (Mesohippus.)
Zittel, K. A. 1893 B, p. 250, fig. 192. (Mesohippus.)
 Oligocene (White River); Colorado?

Miohippus condoni (Leidy).

- Leidy, J.* 1870 P, p. 112. (Anchitherium.)
Cope, E. D. 1879 D, p. 76. (Anchitherium.)

- King, C. 1878 A, p. 424.
 Leidy, J. 1871 C, p. 362. (Anchitherium.)
 1871 J. (Anchitherium.)
 1873 B, pp. 218, 323, pl. ii, fig. 5. (Anchitherium.)
 Marsh, O. C. 1874 B, p. 249. (Anchitherium.)
 Matthew, W. D. 1899 A, p. 63. (Mesohippus.)
 Roger, O. 1896 A, p. 174.
 Trouessart, E. L. 1898 A, p. 781.
 Miocene (John Day); Oregon.

Miohippus copei (Osb. and Wort.).

- Osborn and Wortman 1895 A, pp. 353, 356, fig. 5. (Mesohippus and Anchitherium.)
 Farr, M. S. 1896 A, p. 164, fig. 5. (Mesohippus.)
 Matthew, W. D. 1899 A, p. 56. (Mesohippus.)
 Trouessart, E. L. 1898 A, p. 781. (Mesohippus.)
 Oligocene (White River); South Dakota.

Miohippus cuneatus (Cope).

- Cope, E. D. 1873 T, p. 7. (Anchitherium.)
 1873 CC, p. 14. (Anchitherium.)
 1874 B, p. 497. (Anchitherium.)
 1879 D, p. 76. (Anchitherium.)
 Matthew, W. D. 1899 A, p. 56. (Syn. of *M. bairdi*.)
 Osborn and Wortman 1895 A, p. 353, footnote. (Mesohippus.)
 Roger, O. 1896 A, p. 174. (Mesohippus.)
 Scott, W. B. 1895 C, p. 113. (Mesohippus.)
 Trouessart, E. L. 1898 A, p. 780. (Mesohippus.)
 Oligocene (White River); Colorado.

Miohippus equiceps (Cope).

- Cope, E. D. 1879 D, p. 73. (Anchitherium.)
 1879 B, p. 58. (Anchitherium.)
 1886 H, p. 368. (Anchitherium anceps?)
 1889 C, p. 271, fig. 83. (Anchitherium.)
 1894 D, p. 791. (Anchitherium or Miohippus.)
 Matthew, W. D. 1899 A, pp. 56, 63. (Mesohippus.)
 Roger, O. 1896 A, p. 174.
 Scott, W. B. 1895 C, p. 79.
 Trouessart, E. L. 1898 A, p. 781.
 Miocene (John Day); Oregon. Oligocene? (White River?); Montana?

Miohippus exoletus (Cope).

- Cope, E. D. 1874 B, p. 496. (Anchitherium.)
 1879 D, p. 76. (Anchitherium.)
 1894 D, p. 791. (Anchitherium.)
 Matthew, W. D. 1899 A, p. 56. (Syn. of *M. bairdi*.)
 Osborn and Wortman 1895 A, p. 353. (Mesohippus.)
 Roger, O. 1896 A, p. 174. (Mesohippus.)
 Trouessart, E. L. 1898 A, p. 782. (Anchitherium.)
 Oligocene (White River); Colorado.

Miohippus intermedius (Osb. and Wort.).

- Osborn and Wortman 1895 A, pp. 353, 354, fig. 4. (Mesohippus.)
 Farr, M. S. 1896 A, p. 169, fig. 6. (Mesohippus.)
 Matthew, W. D. 1899 A, p. 56. (Mesohippus.)
 Trouessart, E. L. 1898 A, p. 781. (Mesohippus.)
 Oligocene (White River); South Dakota, Nebraska.

Miohippus longicristis (Cope).

- Cope, E. D. 1879 D, p. 75. (Anchitherium.)
 1879 B, p. 58. (Anchitherium.)
 1886 H, p. 368. (Anchitherium.)
 1894 D, p. 791. (Anchitherium.)
 Matthew, W. D. 1899 A, p. 63. (Mesohippus.)
 Roger, O. 1896 A, p. 174.
 Scott and Osborn 1890 B, p. 88, fig. 12. (Anchitherium.)
 Trouessart, E. L. 1898 A, p. 782.
 Zittel, K. A. 1893 B, p. 251, fig. 195. (Anchitherium.)
 Miocene (John Day); Oregon.

Miohippus præstans (Cope).

- Cope, E. D. 1879 S. (Anchitherium.)
 1887 N, p. 1069, fig. 36. (Anchitherium.)
 1889 B, p. 455. (Anchitherium.)
 1894 D, p. 791. (Anchitherium.)
 Farr, M. S. 1896 A, p. 163. (Mesohippus.)
 Matthew, W. D. 1899 A, p. 63. (Mesohippus.)
 Osborn and Wortman 1895 A, p. 356. (Anchitherium.)
 Roger, O. 1896 A, p. 174.
 Trouessart, E. L. 1898 A, p. 782. (Anchitherium.)
 Miocene (John Day); Oregon.

Miohippus ultimus (Cope).

- Cope, E. D. 1886 B, p. 357. (Anchitherium.)
 1886 H, p. 368. (Anchitherium.)
 1887 N, p. 1068. (Anchitherium.)
 Farr, M. S. 1896 A, p. 169. (Anchitherium.)
 Matthew, W. D. 1899 A, p. 69. (Mesohippus.)
 Roger, O. 1896 A, p. 174.
 Trouessart, E. L. 1898 A, p. 782.
 Miocene (Loup Fork); Oregon.

Miohippus westonii (Cope).

- Cope, E. D. 1889 I, p. 153. (Anchitherium.)
 Ami, H. M. 1891 A. (Anchitherium.)
 Cope, E. D. 1891 A, p. 20, pl. xiv, figs. 1, 2. (Anchitherium.)
 Matthew, W. D. 1899 A, p. 56. (Mesohippus.)
 Roger, O. 1896 A, p. 174. (Mesohippus.)
 Trouessart, E. L. 1898 A, p. 781. (Mesohippus.)
 Oligocene (White River); Canada.

ANCHITHERIUM Meyer. Type *A. aurelianense* (Blainv.).

- Meyer, H. 1844 A, p. 298.
 Ameghino, F. 1896 A, p. 442.
 Blainville, H. M. D. 1864 A, iv, Y, pl. vii. ("Palæotherium hippoides, ou equinum, ou aurelianense.")
 Cope, E. D. 1874 B, p. 496.
 1881 G, p. 399.

- Cope, E. D. 1884 O, p. 714.
 1887 N, p. 1067.
 1889 C, p. 255 *et seq.*
 1892 S, p. 412.
 1894 D, p. 791.
 Dawkins, W. B. 1870 A.
 Depéret, C. 1887 A, p. 213.

Filhol, H. 1891 A, p. 169.
 Flower, W. H. 1876 B, xiii, p. 327.
 Gaudry, A. 1878 B, p. 124.
 Gervais, P. 1859 A, p. 83.
 Huxley, T. H. 1870 B, p. xlix.
 1872 A, p. 306.
 1876 B, xiv, p. 34.
 1876 C, pp. 292, 294.
 Kowalevsky, W. 1873 B.
 Leidy, J. 1854 A, pp. 67, 114.
 1869 A, p. 103.
 1871 C, p. 362.
 Leuthardt, F. 1891 A.
 Lydekker, R. 1886 A, p. 45.
 Major, Fors. 1873 A, p. 103.
 1877 A.
 Marsh, O. C. 1874 B, p. 247.
 Nicholson and Lydekker 1889 A, p. 1358.
 Osborn and Wortman, 1895 A, p. 352.
 Paylow, M. 1888 A.
 Pomel, A. 1847 A, pp. 202, 203, 207.
 Schlosser, M. 1886 B, p. 14.
 Scott, W. B. 1886 B.

Scott, W. B. 1891 B.
 1891 D, p. 90.
 1893 B, p. 660.
 1895 C, p. 94.
 Scott and Osborn 1890 B, p. 88.
 Steinmann and Döderlein 1890 A, p. 781.
 Weithofer, A. 1888 A, p. 278.
 Wilckens, M. 1884 A.
 Woodward, A. S. 1898 B, p. 327.
 Wortman, J. L. 1882 B, vi, p. 69.
 1883 A, p. 710.
 1893 A.
 Zittel, K. A. 1893 B, p. 250.

Anchitherium equinum Scott.

Scott, W. B. 1893 B, p. 661.
 Cope, E. D. 1894 D, p. 790.
 Matthew, W. D. 1899 A, p. 69.
 Roger, O. 1896 A, p. 174.
 Scott, W. B. 1895 C, p. 94, pl. iii, figs. 23-28; pl. iv, figs. 30, 31.
 Trouessart, E. L. 1898 A, p. 782.
 Miocene (Loup Fork); Montana.

DESMATIPPUS Scott. Type *D. crenidens* Scott.

Scott, W. B. 1893 B, p. 661.
 Cope, E. D. 1894 D, p. 790. (Syn. of Anchitherium.)
 Scott, W. B. 1895 C, p. 84.
 Trouessart, E. L. 1898 A, p. 783. (Desmathippus.)

Desmatippus crenidens Scott.

Scott, W. B. 1893 B, p. 661.

Cope, E. D. 1894 D, p. 791. (Anchitherium.)
 Matthew, W. D. 1899 A, p. 69. (Anchippus.)
 Roger, O. 1896 A, p. 175.
 Scott, W. B. 1895 C, p. 84, pl. ii, figs. 9-14.
 Trouessart, E. L. 1898 A, p. 783. (Desmathippus.)
 Miocene (Loup Fork); Montana.

ANCHIPPUS Leidy. Type *A. texanus* Leidy.

Leidy, J. 1868 I, p. 232.
 Cope, E. D. 1884 O, p. 714.
 1887 N, p. 1067.
 1892 W, p. 943.
 1893 A, p. 22.
 Dawkins, W. B. 1870 A.
 Leidy, J. 1869 A, p. 312.
 1871 C, p. 362.
 Marsh, O. C. 1874 B, p. 254.
 Matthew, W. D. 1899 A, p. 22.
 Nicholson and Lydekker 1889 A, p. 1359.

Anchippus brevidens Marsh.

Marsh, O. C. 1874 B, p. 254.
 Cope, E. D. 1892 H, p. 326.
 1892 W, p. 943.

Cope, E. D. 1893 A, p. 23.
 King, C. 1878 A, p. 443.
 Matthew, W. D. 1899 A, p. 69.
 Roger, O. 1896 A, p. 175.
 Trouessart, E. L. 1898 A, p. 783.
 Miocene (Loup Fork); Oregon.

Anchippus texanus Leidy.

Leidy, J. 1868 I, p. 231.
 1869 A, pp. 312, 403, pl. xxi, fig. 13.
 1871 C, p. 362.
 Marsh, O. C. 1874 B, p. 254.
 Matthew, W. D. 1899 A, p. 56.
 Roger, O. 1896 A, p. 175.
 Trouessart, E. L. 1898 A, p. 783.
 Miocene (Loup Fork?); Texas, Colorado.

HYPOHIPPIUS Leidy. Type *H. affinis* Leidy.

Leidy, J. 1858 E, p. 26. (Subgenus.)
 Cope, E. D. 1892 H, p. 326.
 1892 W, p. 943. (Syn. of Protohippus.)
 1893 A, p. 20. (Syn. of Protohippus.)
 Leidy, J. 1869 A, p. 311.
 1871 C, p. 362.
 Marsh, O. C. 1874 B, p. 255.
 Nicholson and Lydekker 1889 A, p. 1359.
 Schlosser, M. 1886 B, p. 14.
 Zittel, K. A. 1893 B, p. 250. (Syn. of Anchitherium.)

Hypohippus affinis Leidy.

Leidy, J. 1858 E, p. 26. [Anchitherium (Hypohippus).]
 Cope, E. D. 1893 A, p. 22.
 Hayden, F. V. 1858 B, p. 158.
 Leidy, J. 1869 A, pp. 311, 402, pl. xxi, figs. 11, 12.
 1871 C, p. 362.
 Roger, O. 1896 A, p. 174.
 Trouessart, E. L. 1898 A, p. 783.
 Pliocene; South Dakota.

EQUINÆ.

- Boule, M. 1899 A, p. 531. ("Équidés.")
 Osborn, H. F. 1893 D, p. 137.
 Osborn and Wortman 1892 A, p. 93.

- Roger, O. 1896 A, p. 175.
 Steinmann and Döderlein 1890 A, p. 782.
 Zittel, K. A. 1893 B, p. 252.

MERYCHIPPUS Leidy. Type *M. insignis* Leidy.

Leidy, J. 1856 Q, p. 311.

Unless otherwise indicated, the following authors refer to this genus under the name *Protohippus*.

- Ameghino, F. 1891 C, p. 215.
 Cope, E. D. 1873 R, p. 420.
 1877 K, p. 322.
 1881 G, p. 399.
 1884 O, p. 714.
 1887 N, p. 1068.
 1889 C.
 1892 H, p. 326. (Parahippus.)
 1892 W, p. 943. (Merychippus, Parahippus.)
 1893 A, p. 20. (Protohippus; Merychippus a synonym.)
 Dana, J. D. 1896 A, p. 913, fig. 1540.
 Dawkins, W. B. 1870 A.
 Farr, M. S. 1896 A, p. 169.
 Flower and Lydekker 1891 A, p. 380.
 Gaudry, A. 1877 A. (Merychippus.)
 Huxley, T. H. 1876 C, p. 294.
 Landois, — 1881 A, p. 128.
 Leidy, J. 1858 E, p. 26 (Protohippus, type *P. perditus*); p. 27 (Merychippus).
 1869 A, p. 275 (Protohippus); p. 292 (Merychippus); p. 313 (Parahippus).
 1870 T, p. 127.
 1871 C, p. 360 (Protohippus); p. 361 (Merychippus); p. 362 (Parahippus).
 Major, Fors. 1873 A, p. 103. (Merychippus.)
 Marsh, O. C. 1877 E.
 1879 L, p. 504.
 1892 C, p. 354.
 Matthew, W. D. 1899 A, p. 69.
 Nicholson and Lydekker 1889 A, p. 1359 (Parahippus); p. 1360 (Protohippus).
 Pawlow, M. 1888 A. (Protohippus, Merychippus.) 1892 A.
 Roger, O. 1889 A.
 Rüttimeyer, L. 1862 A, p. 611. (Merychippus.) 1877 A. (Merychippus.)
 Schlosser, M. 1886 B, p. 14 (Merychippus, Parahippus); p. 15 (Protohippus, syn. of Hipparion).
 Scott, W. B. 1891 D, p. 90 (Merychippus); p. 93 (Protohippus).
 1895 C, p. 79. (Protohippus.)
 Steinmann and Döderlein 1890 A, p. 782 (Merychippus); p. 783 (Protohippus).
 Weithofer, A. 1888 A, p. 276.
 Woodward, A. S. 1898 B, p. 337.
 Wortman, J. L. 1882 B, vi, p. 71.
 1883 A, p. 711.
 Zittel, K. A. 1893 B, p. 252 (Merychippus); p. 255 (Protohippus).

Merychippus avus (Marsh).

- Marsh, O. C.* 1874 B, p. 253. (Protohippus.)
 King, C. 1878 A, p. 443. (Protohippus.)
 Marsh, O. C. 1897 C, p. 524, fig. 100. (Protohippus.)

- Matthew, W. D. 1899 A, p. 70. (Protohippus.)
 Trouessart, E. L. 1898 A, p. 785. (Protohippus.)
 Miocene (Loup Fork); Oregon.

Merychippus castilli (Cope).

- Cope, E. D.* 1885 S, p. 1208, pl. xxxvii, fig. 6. (Protohippus.)
 1886 W, p. 150, fig. 2. (Protohippus.)
 1893 A, p. 26. (Protohippus.)
 Matthew, W. D. 1899 A, p. 70. (Protohippus.)
 Roger, O. 1896 A, p. 177. (Protohippus.)
 Trouessart, E. L. 1898 A, p. 784. (Protohippus.)
 Miocene (Loup Fork); Mexico.

Merychippus cumminsii (Cope).

- Cope, E. D.* 1893 A, p. 67, pl. xx, fig. 7; pl. xxiii, fig. 1. (Equus.)
 1894 A, p. 67. (Equus.)
 1899 A, p. 255. (Equus.)
 Gidley, J. W. 1901, Bull. Amer. Mus. Nat. Hist., xiv, p. 126. (Protohippus.)
 Matthew, W. D. 1899 A, p. 75. (Equus.)
 Trouessart, E. L. 1898 A, p. 791. (Equus.)
 Pliocene (Blanco); Texas, Oklahoma?.

Merychippus fossulatus (Cope).

- Cope, E. D.* 1893 A, p. 30, pls. v, vi, vii. (Protohippus.)
 Matthew, W. D. 1899 A, p. 70. (Pliohippus.)
 Roger, O. 1896 A, p. 177. (Protohippus.)
 Trouessart, E. L. 1898 A, p. 784. (Protohippus.)
 Miocene (Loup Fork); Texas.

Merychippus insignis Leidy.

- Leidy, J.* 1856 Q, p. 311.
 Cope, E. D. 1874 P, p. 13. (Protohippus.)
 1889 B, p. 457. (Protohippus.)
 1892 W, p. 944, pl. xxvi, fig. 4 (Protohippus insignis); fig. 5, (P. medius).
 1893 A, p. 25. (Syn. in part of Protohippus medius; in part of P. sejunctus.)
 Hayden, F. V. 1858 B, p. 158.
 King, C. 1878 A, p. 430.
 Leidy, J. 1858 E, p. 27.
 1869 A, pp. 296, 402, pl. xvii, figs. 3-7.
 1871 C, p. 361.
 Major, Fors. 1877 A.
 Matthew, W. D. 1899 A, p. 69. (Protohippus medius.)
 Osborn, H. F. 1898 I, p. 107, fig. 20.
 Roger, O. 1896 A, p. 175 (Protohippus insignis); p. 177 (P. medius).
 Scott, W. B. 1893 B, p. 659. (Protohippus.)
 Trouessart, E. L. 1898 A, p. 784. (Protohippus sejunctus, part; P. medius, part.)
 Weithofer, A. 1888 A, p. 278.
 Zittel, K. A. 1893 B, p. 252, fig. 196.
 Miocene (Loup Fork); South Dakota, Kansas, Oregon, Mexico.

Merychippus labrosus (Cope).

- Cope, E. D.* 1874 P, p. 13. (Protohippus.)
 1874 B, p. 523. (Protohippus.)
 1893 A, p. 26. (Protohippus.)
Matthew, W. D. 1899 A, p. 69. (Protohippus labrosus; syn. of *P. perditus*.)
Roger, O. 1896 A, p. 177. (Protohippus.)
Trouessart, E. L. 1898 A, p. 784. (Protohippus.)
 Miocene (Loup Fork); Colorado.

Merychippus lenticularis (Cope).

- Cope, E. D.* 1893 A, p. 41, pl. xii, figs. 1, 2. (Protohippus.)
Matthew, W. D. 1899 A, p. 75. (Protohippus.)
Roger, O. 1896 A, p. 177. (Protohippus.)
Trouessart, E. L. 1898, p. 784. (Protohippus.)
 Pliocene (Palo Duro); Texas.

Merychippus mirabilis Leidy.

- Leidy, J.* 1858 E, p. 27.
Cope, E. D. 1892 W, p. 943. (Protohippus.)
 1893 A, p. 32, pl. viii; pl. ix, fig. 1; pl. x, fig. 4? (Protohippus.)
Hayden, F. V. 1858 F, p. 158.
King, C. 1878 A, p. 430.
Leidy, J. 1869 A, pp. 299, 327, 402, pl. xvii, figs. 8-15; pl. xxvii, fig. 1.
 1870 J, p. 67.
 1871 C, p. 361.
 1873 B, pp. 248, 250, 322, pl. xx, figs. 16, 20. (*M. mirabilis?*)
Matthew, W. D. 1899 A, p. 70. (Pliohippus.)
Roger, O. 1896 A, p. 175.
Trouessart, E. L. 1898 A, p. 784. (Protohippus.)
Weithofer, A. 1888 A, p. 278.
 Miocene (Loup Fork); Nebraska, Colorado, South Dakota, Texas, Utah?.

Merychippus pachyops (Cope.)

- Cope, E. D.* 1892 W, p. 944, pl. xxvi, fig. 1. (Protohippus.)
 1893 A, p. 26, pl. xi, fig. 1; pl. xii; pl. xvii, figs. 2, 3. (Protohippus.)
Matthew, W. D. 1899 A, p. 70. (Pliohippus.)
Roger, O. 1896 A, p. 177. (Protohippus.)
Trouessart, E. L. 1898 A, p. 783. (Protohippus.)
 Miocene (Loup Fork); Texas.

Merychippus parvulus (Marsh.)

- Marsh, O. C.* 1868 A, p. 374. (Equus.)
Cope, E. D. 1892 H, p. 326. (Protohippus.)
 1892 W, p. 943. (Protohippus.)
 1893 A, pp. 25, 29, pl. xi figs. 1, 2. (Protohippus parvulus?)
King, C. 1878 A, p. 430. (Protohippus.)
Leidy, J. 1868 D, p. 195. ("Equus.")
 1869 A, p. 400. (Equus.)
 1871 C, p. 360. (Equus.)
 1873 B, pp. 252, 323, pl. xx, fig. 23. ("Anchitherium?")
Marsh, O. C. 1874 B, p. 251. (Protohippus.)
Matthew, W. D. 1899 A, p. 69. (Syn. of Protohippus placidus.)
Osborn, H. F. 1890 B, p. 89. (Anchitherium?)
Roger, O. 1896 A, p. 174 (Mesohippus?); p. 177 (Protohippus).

Trouessart, E. L. 1898 A, p. 785. (Subsp. of Protohippus placidus.)

Miocene (Loup Fork); Nebraska, Texas?.

Merychippus perditus (Leidy.)

- Leidy, J.* 1858 E, p. 26. [Equus (Protohippus).]
Burmeister, H. 1875 A, p. 12. (Protohippus.)
Cope, E. D. 1874 B, pp. 524, 528. (Protohippus.)
 1874 P, p. 18. (Protohippus.)
 1889 B, p. 447, pl. ii, figs. 9, 12. (Protohippus profectus.)
 1892 W, p. 943, pl. xxvi, fig. 2. (Protohippus.)
 1893 A, pp. 24, 42, pl. x, fig. 2. (Protohippus.)
 1894 A, p. 66. (Protohippus.)
Hayden, F. V. 1858 B, p. 158. (Equus perditus, Parahippus cognatus.)
King, C. 1878 A, p. 430. (Protohippus.)
Leidy, J. 1858 E, p. 26. [Anchitherium (Parahippus) cognatus.]
 1869 A, pp. 275, 327, 400, pl. xvii, figs. 1, 2; pl. xxvii, fig. 5 (Protohippus perditus); pl. xxi, figs. 7-10 (Parahippus cognatus).
 1870 J, p. 67. (Protohippus.)
 1870 W, p. 127. (Protohippus.)
 1871 C, p. 360 (Protohippus perditus); p. 362 (Parahippus cognatus).
 1873 B, pp. 248-250, 322, pl. xx, figs. 16, 20. (Protohippus.)
Matthew, W. D. 1899 A, pp. 69, 75. (Protohippus.)
Roger, O. 1896 A, p. 175 (Parahippus cognatus); p. 177 (Protohippus perditus).
Trouessart, E. L. 1898 A, p. 784. (Protohippus.)
 Miocene (Loup Fork); Nebraska, Colorado, Oklahoma, Kansas, Wyoming; Pliocene (Palo Duro); Texas.
- Merychippus phlegon Hay.**
Hay, O. P. 1899 G, p. 345. (Equus.)
Cope, E. D. 1893 A, pp. 44, 66, 67, pl. xx, fig. 8 (Equus minutus, preoccupied.)
 1893 Q, p. 812. (E. minutus.)
 1899 A, p. 255. (E. minutus.)
Gidley, J. W. 1901, Bull. Amer. Mus. Nat. Hist., xiv, p. 127, figs. 18, 19. (Protohippus.)
Matthew, W. D. 1899 A, p. 75. (E. minutus.)
Trouessart, E. L. 1898 A, p. 791. (E. minutus.)
 Pliocene (Blanco); Texas.
- Merychippus placidus (Leidy.)**
Leidy, J. 1869 A, pp. 277, 328, 401, pl. xviii, figs. 39-48; pl. xxvii, figs. 6, 7. (Protohippus.)
Cope, E. D. 1873 R, p. 420. (Protohippus.)
 1874 B, pp. 524, 528. (Protohippus.)
 1874 P, p. 19. (Protohippus.)
 1892 H, p. 325. (Protohippus.)
 1892 W, p. 942, pl. xxv. (Protohippus.)
 1893 A, pp. 26, 34, pl. xi, figs. 3-8. (Protohippus.)
 1893 Q, p. 812. (Protohippus.)
Leidy, J. 1870 W, p. 127. (Protohippus.)
 1871 C, p. 360. (Protohippus.)
 1873 B, pp. 249, 250, 322, pl. xx, figs. 17, 18. (Protohippus.)
Matthew, W. D. 1899 A, p. 69. (Protohippus.)

Roger, O. 1896 A, p. 177. (Protohippus.)
 Trouessart, E. L. 1898 A, p. 785. (Protohippus.)
 Miocene (Loup Fork); Nebraska, Colorado,
 South Dakota, Texas,

Merychippus sejunctus (Cope.)

Cope, E. D. 1874 P, p. 15. (Protohippus.)
 1873 R, p. 420. (Protohippus; no description.)
 1874 B, pp. 523, 524. (Protohippus.)
 1881 I, p. 271, fig. 3. (Protohippus.)
 1884 J, p. 544, fig. 3. (Protohippus.)
 1886 B, p. 359. (Protohippus.)
 1886 H. (Protohippus.)
 1887 N, p. 1071, fig. 39. (Protohippus.)
 1887 S, p. 271, fig. 3. (Protohippus.)
 1889 C, p. 160. (Protohippus.)
 1893 A, pp. 23, 25. (Protohippus.)
 Matthew, W. D. 1899 A, p. 69. (Protohippus.)
 Roger, O. 1896 A, p. 177. (Protohippus.)
 Scott, W. B. 1893 B, p. 659. (Protohippus.)
 Trouessart, E. L. 1898 A, p. 784. (Protohippus.)
 Woodward, A. S. 1898 B, p. 337, fig. 194. (Protohippus.)
 Wortman, J. L. 1883 A, p. 711, figs. 141, 142. (Protohippus.)
 Zittel, K. A. 1893 B, p. 256, figs. 200, 201. (Protohippus.)
 Miocene (Loup Fork); Colorado, Montana,
 Oregon? New Mexico?.

Merychippus supremus (Leidy.)

Leidy, J. 1869 A, pp. 328, 401, pl. xxvii, figs. 3, 4.
 (Protohippus.)
 Cope, E. D. 1893 A, p. 25. (Syn. of Protohippus mirabilis.)
 King, C. 1878 A, p. 430. (Protohippus.)
 Leidy, J. 1870 W, p. 127. (Protohippus.)
 1871 C, p. 360. (Protohippus.)
 Matthew, W. D. 1899 A, p. 70. (Syn. of Protohippus mirabilis.)
 Roger, O. 1896 A, p. 177. (Protohippus.)
 Trouessart, E. L. 1898 A, p. 784. (Syn. of Protohippus mirabilis.)
 Miocene (Loup Fork); South Dakota.

Merychippus sp. indet.

Cope, E. D. 1877 K, p. 323, pl. lxxxv, fig. 7. (Protohippus sp.)
 Miocene (Loup Fork); New Mexico.

Merychippus sp. indet.

Scott, W. B. 1895 C, p. 93, pl. ii, fig. 17. (Protohippus sp.)
 Trouessart, E. L. 1898 A, p. 784. (Syn. of Protohippus mirabilis.)
 Miocene; Montana.

PLIOHIPPIUS Marsh. Type *P. pernix* Marsh.

Marsh, O. C. 1874 B, p. 252.
 Cope, E. D. 1879 A, p. 47. (Syn. of Hippidium.)
 1880 B, p. 47. (Syn. of Hippidium.)
 Dana, J. D. 1896 A, p. 913, fig. 1540.
 Flower and Lydekker 1891 A, p. 381.
 Landois, —, 1881 A, p. 128.
 Marsh, O. C. 1874 D.
 1877 E, p. 359.
 1879 D, p. 504.
 1892 C, p. 354.
 Matthew, W. D. 1899 A, p. 70.
 Nicholson and Lydekker 1889 A, p. 1356.
 Schlosser, M. 1886 B, p. 15.
 Weithofer, A. 1888 A, p. 276.
 Zittel, K. A. 1893 B, p. 256.

Plihippus gracilis Marsh.

Marsh, O. C. 1892 C, p. 347.
 Pliocene; Oregon.

Plihippus pernix Marsh.

Marsh, O. C. 1874 B, p. 252.
 Cope, E. D. 1880 G. (Hippidium.)
 King, C. 1878 A, p. 430.

Marsh, O. C. 1897 C, pp. 524, 527, fig. 99.
 Matthew, W. D. 1899 A, p. 70.
 Roger, O. 1896 A, p. 177.
 Trouessart, E. L. 1898 A, p. 785.
 Miocene (Loup Fork); Nebraska, Colorado.

Plihippus robustus Marsh.

Marsh, O. C. 1874 B, p. 253.
 Cope, E. D. 1880 G. (Hippidium.)
 King, C. 1878 A, p. 430.
 Matthew, W. D. 1899 A, p. 70.
 Roger, O. 1896 A, p. 177.
 Trouessart, E. L. 1898 A, p. 785.
 Miocene (Loup Fork); Nebraska.

Plihippus simplicidens (Cope.)

Cope, E. D. 1892 J, p. 124, fig. 1. (Equus.)
 1892 E, p. 252. (Equus.)
 1892 G, p. 228. (Equus.)
 1892 P. (Equus.)
 1893 A, pp. 41, 44, 66, pl. xx, figs. 1-3. (Equus.)
 Gidley, J. W., 1901, Bull. Amer. Mus. Nat. Hist.,
 xiv, p. 123.
 Trouessart, E. L. 1898 A, p. 785.
 Pliocene (Palo Duro, Blanco); Texas.

HIPPIDIUM Owen. Type *Equus neogaeus* Lund.

Owen, R. 1870 B, p. 572.
 The amended form of this name, *Hippidium*,
 is employed by many authors.
 Ameghino, F. 1889 A, p. 513.
 1891 A.
 1891 C, p. 215.
 Branco, W. 1897 A, pp. 19, 78.

Burmeister, H. 1875 A.
 1889 A, p. 3.
 Cope, E. D. 1879 A, p. 47.
 1880 B, p. 47.
 1881 G, p. 400.
 1884 O, p. 715.
 1887 N, p. 1073.

Cope, E. D. 1893 A, p. 20.

1899 A, p. 256.

Gervais and Ameghino 1880 A, p. 87.

Lydekker, R. 1893 D, pt. iii, p. 74.

Nicholson and Lydekker 1889 A, p. 1361.

Pavlow, M. 1892 A.

Steinmann and Döderlein 1890 A, p. 784.

Wilckens, M. 1884 B, p. 331.

Woodward, A. S. 1898 B, p. 338.

Wortman, J. L. 1883 A, p. 711.

Zittel, K. A. 1893 B, p. 256.

Hippidion interpolatum Cope.

Cope, E. D. 1893 A, p. 42, pl. xii, figs. 3, 4. (Hippidion.)

Matthew, W. D. 1899 A, p. 75. (Pliohippus.)

Trouessart, E. L. 1898 A, p. 786.

Pliocene (Palo Duro); Texas.

Hippidion spectans Cope.

Cope, E. D. 1880 G. (Hippidion.)

1887 N, p. 1072, fig. 41. (Hippidion.)

1892 E, p. 253. (Hippidion.)

1893 A, p. 43, pl. xii, figs. 5, 6. (Hippidion? spectans.)

Matthew, W. D. 1899 A, pp. 70, 75. (Pliohippus.)

Roger, O. 1896 A, p. 178. (Pliohippus.)

Trouessart, E. L. 1892 A.

1898 A, p. 786.

Zittel, K. A. 1893 B, p. 256. (Pliohippus.)

Miocene (Loup Fork); Oregon: Pliocene (Palo Duro); Texas.

HIPPARION Christol.

Christol, J., 1832, Ann. Sci. Indust. Mid. France, i, p. 180.

Christol's name *Hipparion* for this genus antedates Kaup's *Hippotherium*. It is said by Christol (Bull. Soc. Geol. France, ix, 1852, p. 255) to have been defined, but the present writer has not been able to learn whether or not Christol described or designated a type species.

Ameghino, F. 1891 C, p. 215. (Hippotherium.)

Branco, W. 1897 A, pp. 19, 78. (Hipparion.)

Boule, M. 1899 A, p. 541. (Hipparion.)

Bronn, H. G. 1838 A, p. 1192 (Hippotherium); p. 1193 (Hipparion).

Cope, E. D. 1879 D, p. 76. (Stylonus, type *S. sc-*
versus Cope.)

1881 G, p. 399. (Hippotherium.)

1884 O, p. 714. (Hippotherium.)

1887 N, p. 1068. (Hippotherium.)

1889 B, p. 430. (Hippotherium.)

1889 C, p. 256. (Hippotherium.)

1893 A, pp. 21, 36. (Hippotherium.)

Filhol, H. 1891 A, p. 186, seq. (Hipparion.)

Flower and Lydekker 1891 A, p. 380. (Hipparion.)

Gaudry, A. 1878 B, p. 124. (Hipparion.)

1890 A. (Hipparion.)

Gervais, P. 1859 A, p. 80. (Hipparion.)

Hensel, R. 1860 A. (Hipparion.)

Huxley, T. H. 1870 A, p. 439. (Hipparion.)

1870 B, p. xlix. (Hipparion.)

1872 A, p. 306. (Hipparion.)

Kaup, J. J. 1833 A, p. 327. (Hippotherium, type
H. gracilis Kaup.)

1835 A. (Hippotherium.)

Kowalevsky, W. 1873 A, p. 220. (Hipparion.)

Leidy, J. 1854 C, p. 90. (Hippodon, type *H. spec-*
iosus Leidy.)

1858 E, p. 27.

1869 A, p. 280. (Hipparion.)

1871 C, p. 360. (Hipparion.)

1873 B, p. 247. (Hipparion.)

Leuthardt, F. 1891 A. (Hippotherium.)

Lydekker, R. 1882 A. (Hipparion.)

1886 A, p. 50. (Hipparion.)

1891 A, p. 380. (Hipparion.)

Major, Fors. 1877 A. Hipparion.)

Marsh, O. C. 1874 B, p. 255. (Hipparion.)

1874 D. (Hipparion.)

Nicholson and Lydekker 1889 A, p. 1360. (Hipparion.)

Osborn, H. F. 1893 D, p. 7. (Hipparion.)

Owen, R. 1845 B, p. 573. (Hipparion.)

Pavlow, M. 1888 A. (Hipparion.)

1890 A. (Hipparion.)

1892 A. (Hipparion.)

Pictet, F. J. 1853 A, p. 314. (Hipparion, Hippo-
therium.)

Quenstedt, F. A. 1850 A. (Hippotherium.)

Rütimeyer, L. 1862 A, p. 646. (Hipparion.)

Schlosser, M. 1886 B, p. 15. (Hipparion.)

Scott, W. B. 1893 B, p. 661. (Hipparion.)

Steinmann and Döderlein 1890 A, p. 782.

Weithofer, A. 1888 A, p. 273. (Hipparion.)

Wilckens, M. 1884 A. (Hipparion.)

1888 A. (Hipparion.)

Woodward, A. S. 1898 B, p. 338. (Hipparion.)

Wortman, J. L. 1882 B, vi, p. 73. (Hippothe-
rium.)

1883 A, p. 711. (Hippotherium.)

1886 A, p. 483. (Hippotherium.)

Zittel, K. A. 1893 B, p. 252. (Hipparion.)

Hipparion affine Leidy.

Leidy, J. 1869 A, pp. 286, 402, pl. xviii, figs. 20-24.
(Hipparion.)

Cope, E. D. 1889 B, p. 434, fig. 1. (Hippotherium
occidentale, not of Leidy; *H. affine*.)

1893 A, p. 36. (Hippotherium.)

Leidy, J. 1871 C, p. 361. (Hipparion.)

Lydekker, R. 1882 A, p. 70. (Hippotherium.)

Pavlow, M. 1888 A, pl. i, fig. 26. (Hipparion.)

Roger, O. 1896 A, p. 176. (Hipparion.)

Trouessart, E. L. 1898 A, p. 786. (Hipparion.)

Miocene (Loup Fork); Nebraska, Texas.

Hipparion calamarium (Cope).

Cope, E. D. 1875 P, p. 259. (Hippotherium.)

1875 F, p. 70. (Hippotherium.)

1877 K, p. 321, pl. lxxv, figs. 1, 2. (Hippo-
therium.)

1889 B, p. 451, fig. 15. (Hippotherium.)

1893 A, p. 22. (Hippotherium.)

Matthew, W. D. 1899 A, p. 70. (Hipparion.)

Roger, O. 1896 A, p. 176. (Hipparion.)

Trouessart, E. L. 1898 A, p. 789. [Hipparion (Sty-
lonus).]

Miocene (Loup Fork); New Mexico, Colorado.

Hipparion eurystylum (Cope).

Cope, E. D. 1893 A, pp. 43, 66, pl. xii, figs 7, 8; pl. xx, fig. 6. (Equus.)

1899 A, p. 255. (Equus.)

Gidley, J. W., 1901, Bull. Amer. Mus. Nat. Hist., xiv, p. 125. (Hipparion.)

Matthew, W. D. 1899 A, p. 75. (Equus.)

Trouessart, E. L. 1898 A, p. 791. (Equus.)

Pliocene (Goodnight?); Texas.

Hipparion gratum Leidy.

Leidy, J. 1869 A, pp. 287, 326, 402, pl. xviii, figs. 25, 30. (Hipparion.)

Cope, E. D. 1889 B, p. 445, figs. 16, 17. (Hippotherium.)

1892 H, p. 325. (Hippotherium.)

1892 W, p. 942. (Hippotherium.)

1893 A, pp. 21, 26. (Syn. of *Protohippus placidus*.)

Leidy, J. 1871 C, p. 361. (Hipparion.)

1885 A, p. 33, figure. (Hippotherium ingenuum.)

1887 A, p. 309. (Hippotherium.)

1889 B. (Hippotherium ingenuum.)

1889 E, p. 20, pl. iii, figs. 2-4; text figure. (Hippotherium ingenuum.)

1892 A. (Hippotherium ingenuum.)

Leidy and Lucas 1896 A, p. 49, pl. xviii, figs. 15, 16; pl. xix, figs. 9, 10. (Hippotherium.)

Lydekker, R. 1882 A, p. 70. (Hippotherium.)

Matthew, W. D. 1899 A, p. 69. (Syn. of *Protohippus placidus*.)

Roger, O. 1896 A, p. 176. (Hipparion ingenuum.)

Trouessart, E. L. 1898 A, p. 785. (Syn. of *Protohippus placidus*.)

Miocene (Loup Fork); Nebraska, Kansas.

Hipparion isonesum (Cope).

Cope, E. D. 1889 B, p. 451, fig. 23. (Hippotherium.)

1886 B, p. 359. (Hippotherium seversum, in part.)

Matthew, W. D. 1899 A, p. 70. (Hipparion.)

Trouessart, E. L. 1898 A, p. 789. [Hipparion (*Stylionus*).]

Miocene (Ticholeptus); Montana, Oregon, Colorado.

Hipparion minimum (Douglass).

Douglass, E. 1900 A, p. 26.

Miocene; Montana.

Hipparion montezumæ (Leidy).

Leidy, J., 1882, Proc. Acad. Nat. Sci. Phila., p. 291. (Hippotherium.)

Cope, E. D. 1889 B, p. 435. (Hippotherium.)

Leidy, J. 1889 E, p. 21, pl. v, figs. 5-7, 10. (Hippotherium.)

Matthew, W. D. 1899 A, p. 70. (Hipparion.)

Roger, O. 1896 A, p. 176. (Hipparion.)

Trouessart, E. L. 1898 A, p. 787. (Hipparion montezumai.)

Miocene (Loup Fork); Mexico.

Hipparion occidentale Leidy.

Leidy, J. 1856 D, p. 59. (Hipparion.)

Cope, E. D. 1886 B, p. 359. (Hippotherium.)

1886 H. (Hippotherium.)

Cope, E. D. 1892 AA. (Hippotherium.)

1893 A, p. 36. (Hippotherium.)

Hayden, F. V. 1858 B, p. 158.

Leidy, J. 1856 B, p. 422. (Hipparion.)

1858 E, p. 27. (Hipparion.)

1869 A, pp. 281, 326, 401, pl. xviii, figs. 1-5; pl. xxvii, fig. 2.

1871 C, p. 361. (Hipparion.)

Lydekker, R. 1882 A, p. 70. (Hippotherium.)

Matthew, W. D. 1899 A, p. 70. (Hipparion.)

Roger, O. 1896 A, p. 176. (Hipparion.)

Trouessart, E. L. 1898 A, p. 787. (Hipparion occidentale, in part.)

Wortman, J. L. 1883 A, p. 712. (Hippotherium.)

Miocene (Loup Fork); South Dakota, Texas.

Hipparion paniense (Cope).

Cope, E. D. 1874 P, p. 12. (Hippotherium.)

1874 B, p. 522. (Hippotherium.)

1889 B, p. 447, figs. 13, 14. (Hippotherium.)

Lydekker, R. 1882 A, p. 70. (Hippotherium.)

Matthew, W. D. 1899 A, p. 70. (Hipparion.)

Roger, O. 1896 A, p. 176. (Hipparion.)

Trouessart, E. L. 1898 A, p. 788. (Hipparion.)

Miocene (Loup Fork); Colorado.

Hipparion peninsulatum (Cope).

Cope, E. D. 1885 S, pl. xxxvii, fig. 5. (Hippotherium; no description.)

1886 W, p. 150, fig. 1. (Hippotherium.)

1889 B, p. 436, fig. 4. (Hippotherium.)

Matthew, W. D. 1899 A, p. 70. (Hipparion.)

Roger, O. 1896 A, p. 176. (Hipparion.)

Trouessart, E. L. 1898 A, p. 787. (Hipparion.)

Miocene (Loup Fork); Mexico.

Hipparion plicatile (Leidy).

Leidy, J. 1887 A, p. 309, figure. (Hippotherium.)

Cope, E. D. 1889 B, p. 444, fig. 6. (Hippotherium.)

Leidy, J. 1889 B. (Hippotherium.)

1889 E, p. 20. (Hippotherium.)

1892 AA. (Hippotherium.)

Leidy and Lucas 1896 A, p. 50, pl. xviii, figs. 11-14; pl. xix, figs. 1-8. (Hippotherium.)

Roger, O. 1896 A, p. 176. (Hipparion.)

Trouessart, E. L. 1898 A, p. 787. (Hipparion.)

Miocene; Florida.

Hipparion rectidens (Cope).

Cope, E. D. 1886 B, p. 360. (Hippotherium.)

1889 B, pp. 435, 458. (Hippotherium.)

Roger, O. 1896 A, p. 176. (Hipparion.)

Trouessart, E. L. 1898 A, p. 787. (Hipparion.)

Miocene (Loup Fork); Mexico.

Hipparion relictum (Cope).

Cope, E. D. 1889 K, p. 254. (Hippotherium.)

1889 B, p. 449, figs. 19, 20. (Hippotherium.)

Matthew, W. D. 1899 A, p. 70. (Hipparion.)

Roger, O. 1896 A, p. 176. (Hipparion.)

Trouessart, E. L. 1898 A, p. 788. (Hipparion.)

Pliocene (Blanco); Oregon.

Hipparion retrusum (Cope).

Cope, E. D. 1889 B, p. 446, figs. 7, 8. (Hippotherium.)

Trouessart, E. L. 1898 A, p. 788. (Hipparion.)

Miocene (Loup Fork); Kansas.

Should go under Anchitherium

Hipparion seversum (Cope).

- Cope, E. D. 1879 D, p. 76. (Stylonus.)
 1886 H. (Hippotherium.)
 1889 B, p. 457, fig. 24. (Hippotherium.)
 Matthew, W. D. 1899 A, p. 71. (Hipparion.)
 Trouessart, E. L. 1898 A, p. 779. [Hipparion (Stylonus).]
 Wortman, J. L. 1883 A, p. 712. (Hippotherium.)
 Miocene? (Ticholeptus); Oregon.

Hipparion sinclairii (Wort.).

- Wortman, J. L. 1883 A, p. 712. (Hippotherium.)
 Cope, E. D. 1886 B, p. 359. (Hippotherium.)
 1886 H. (Hippotherium.)
 1889 B, p. 434, fig. 2. (Hippotherium.)
 Matthew, W. D. 1899 A, p. 70. (Hipparion.)
 Roger, O. 1896 A, p. 176. (Hipparion.)
 Trouessart, E. L. 1898 A, p. 787. (Hipparion.)
 Miocene (Loup Fork); Oregon.

Hipparion speciosum Leidy.

- Leidy, J. 1854 C, p. 90. (Hippodon.)
 Cope, E. D. 1875 F, p. 71. (Hippotherium.)
 1877 K, p. 322, pl. lxxv, fig. 3. (Hippotherium.)
 1887 N, p. 1070, fig. 38. (Hippotherium.)
 1889 B, p. 436, fig. 5. (Hippotherium.)
 Hayden, F. V. 1858 B, p. 158. (Hipparion.)
 Leidy, J. 1856 Q, p. 311. [Hipparion (Hippodon).]
 1858 E, p. 27. (Hipparion *seu* Hippotherium.)
 1869 A, pp. 282, 401, pl. xviii, figs. 6-9. (Hipparion.)
 1871 C, p. 361. (Hipparion.)
 1873 B, pp. 247, 248, 322, pl. xx, figs. 14, 15. (Hipparion.)

- Lydekker, R. 1882 A, p. 70. (Hippotherium.)
 Matthew, W. D. 1899 A, p. 70. (Hipparion.)
 Roger, O. 1896 A, p. 176. (Hipparion.)
 Trouessart, E. L. 1898 A, p. 787. (Hipparion.)
 Wortman, J. L. 1883 A, p. 711, figs. 138, 139. (Hippotherium.)
 Zittel, K. A. 1893 B, p. 253, fig. 198. (Hipparion.)
 Miocene (Upper); South Dakota, New Mexico.
 Colorado, Texas, Kansas.

Hipparion sphenodus (Cope).

- Cope, E. D. 1889 B, p. 449, figs. 21, 22. (Hippotherium.)
 1874 P, p. 12. (Hippotherium speciosum, not of Leidy.)
 1884 B, p. 522. (Hippotherium speciosum, not of Leidy.)
 Matthew, W. D. 1899 A, p. 71. (Hipparion.)
 Trouessart, E. L. 1898 A, p. 788. (Hipparion.)
 Miocene (Loup Fork); Colorado.

Hipparion venustum Leidy.

- Leidy, J. 1860 B, p. 105, pl. xvi, figs. 32, 33. (Hippotherium.)
 Cope, E. D. 1889 B, p. 448, fig. 18. (Hippotherium.)
 Leidy, J. 1853 E. (Hipparion venustum; no description.)
 1869 A, p. 401. (Hipparion.)
 1871 C, p. 361. (Hipparion.)
 1877 A, p. 212. (Hipparion.)
 Lydekker, R. 1882 A, p. 71. (Hippotherium.)
 Roger, O. 1896 A, p. 176. (Hipparion.)
 Trouessart, E. L. 1898 A, p. 787. (Hipparion.)
 Tertiary; South Carolina.

EQUUS Linn. Type *E. caballus* Linn.

- Linnaeus, C., 1758, Syst. Nat., ed. 10, i, p. 73.
 Ameghino, F. 1889 A, p. 503.
 1891 A.
 Auld, R. C. 1892 A.
 Blake, C. C. 1863 A.
 Blake, W. P. 1864 A.
 Boas, J. E. 1884 A.
 Boule, M. 1899 A, p. 531.
 Branco, W. 1897 A, pp. 19, 67.
 Burmeister, H. 1867 A, p. 238.
 1875 A.
 1889 A, p. 14.
 Cope, E. D. 1881 G, p. 400.
 1884 G, p. 9.
 1884 O, p. 715.
 1884 JJ, p. 40.
 1887 N.
 1889 C, p. 257.
 1892 J, p. 125. (Tomolabis, type *E. fraternus* Leidy, part.)
 1899 A, p. 256.
 Cuvier, G. 1834 A, iii, p. 193, plates.
 Dana, J. D. 1896 A, p. 913, fig. 1540.
 Ewart, J. C. 1894 A.
 1894 B.
 Flower, W. H. 1881 A.
 1885 A.
 Flower and Lydekker 1891 A, p. 381.
 Gaudry, A. 1878 B, p. 137.
 Gervais, P. 1874 A.

- Gray, J. E. 1869 A, p. 263.
 Huxley, T. H. 1870 A, p. 439.
 1870 B, p. xlix.
 Leidy, J. 1869 A, p. 258.
 1871 C, p. 359.
 Leuthardt, F. 1891 A, p. 102.
 Lydekker, R. 1882 A.
 1886 A, p. 65.
 Marsh, O. C. 1874 B, p. 256.
 1877 E.
 1879 D, p. 499.
 Mojsisovics, A. 1889 A.
 Nicholson and Lydekker 1889 A, p. 1361.
 Owen, R. 1844 A, p. 230.
 1845 B, p. 572.
 1846 B, p. 383.
 1866 B, p. 447, figs. 300, 303-305.
 1868 A, p. 352, figs. 280-285.
 Paulli, S. 1900 A, p. 190.
 Pictet, F. J. 1853 A, p. 315.
 Ridewood, W. G. 1895 A.
 Roger, O. 1889 A.
 Ryder, J. A. 1877 A.
 Rüttimeyer, L. 1862 A, p. 671.
 Schlosser, M. 1886 A, pp. 253, 432.
 Scott, W. B. 1891 B.
 Steinmann and Döderlein 180 A, p. 783.
 Struthers, J. 1885 A.
 1893 B.
 Trouessart, E. L. 1892 A.

Trouessart, E. L. 1898 A, p. 790.

Weithofer, A. 1888 A, p. 273.

Wheatley, C. M. 1871 A.

Wilckens, M. 1884 A.

1885 B.

1885 A.

The North American species of this genus have been greatly confused, and many of the identifications of authors are erroneous. In this work the species are accepted on the authority of Mr. J. W. Gidley, of the American Museum of Natural History, New York, who has made an exhaustive study of them. His paper appeared in the Bulletin of the Museum, vol. xiv, 1901, pp. 92-142. He is not to be held responsible for the citations that are made under the various species.

Equus caballus Linn.

Linnaeus, C., 1758, Syst. Nat., ed. 10, i, p. 73.

Agassiz, L. in Holmes, F. S. 1858 A. ("Horse.")

Boule, M. 1899 A, p. 531, figs. 1, 6, 9, 12, 19.

Broadhead, G. C. 1870 A. ("Horse;" species doubtful.)

Buckland, W. 1831 A, p. 595, pl. iii, figs. 14-16. ("Horse;" species doubtful.)

Cope, E. D. 1884 G, pp. 10, 11.

1887 N, p. 1072, fig. 43.

1893 A, pp. 66, 82.

Dana, J. D. 1879 A, p. 233.

Emmons, E. 1858 B, p. 196, figs. 18-21. (E. caballus; identification doubtful.)

Gidley, J. W. 1900 A, p. 111, figs. 4, 5, A.

Holmes, F. S. 1858 A. ("Horse.")

Huxley, T. H. 1872 A, p. 295.

Leidy, J. in Holmes, F. S. 1858 A. ("Horse.")

1860 B, p. 101.

1869 A, pp. 261, 399. (E. caballus, E. fossilis.)

1871 C, p. 360. (E. fossilis.)

1889 D, p. 16.

1889 E, p. 19.

Leidy, J. in Whitney, J. D. 1879 A, p. 257.

Lydekker, R. 1882 A, p. 71.

1886 A, pp. 73, 78, 80, 82, 83, 86.

Marsh, O. C. 1879 D.

Owen, R. 1845 B, p. 572, pls. cxxxvi, cxxxvii.

1868 A, p. 352, figs. 280-285.

1890 A.

Pavlov, M. 1888 A.

1890 A.

Richardson, J. 1854 A, p. 17. (E. fossilis.)

Roger, O. 1896 A, p. 180.

Swallow, G. C. 1866 A. ("Horse;" possibly not E. caballus.)

Wilckens, M. 1884 B, p. 337.

1888 A, p. 16.

Zittel, K. A. 1893 B, pp. 234, 235, figs. 169G, 170F; p. 257, fig. 202.

Pleistocene: Alaska, California, Kansas, Missouri, North Carolina, South Carolina, Canada.

Remains supposed to belong to the same species as our domestic horse have been found in various places in North America. In some cases the identifications have been open to question; in other cases the remains may have been derived from the introduced race. The former existence of the species in Alaska and in California appears well established.

Equus complicatus Leidy.

Leidy, J. 1858 C, p. 11.

Blake, C. C. 1863 A, p. 28. (E. nearcticus Blake.)

Carpenter, W. M. 1838 A, p. 202, figs. 1-3. ("Horse.")

Cooper, Wm. 1831 A, p. 207. ("Equus.")

Cooper, Smith and De Kay, 1831 A, p. 371. ("Horse.")

Cope, E. D. 1869 E, p. 176.

1869 N, p. 741.

1878 H, p. 389. (E. major.)

1882 FF, p. 922. (E. major.)

1884 G, pp. 10, 11. (E. major.)

1884 JJ, p. 41. (E. major.)

1889 F. (E. major.)

1889 S, p. 980. (E. major.)

1892 E, p. 251. (E. major.)

1892 J, p. 123. (E. major.)

1893 A, p. 83. (E. major.)

1896 H, p. 463, pl. xi, fig. 8; pl. xii. (E. intermedius.)

1899 A, pp. 255, 259. (E. complicatus, E. intermedius.)

Cragin, F. W. 1896 A, p. 53.

De Kay, J. E. 1842 C, p. 108. E. major; no description, no figures, no types.)

Gibbes, R. W. 1850 B. (E. americanus.)

1850 C. (E. americanus.)

Gidley, J. W. 1900 A, p. 114. (E. eous.)

Hay, O. P. 1899 A, p. 593. (E. eous, to replace E. intermedius.)

Holmes, F. S. 1850 A. ("Equus.")

Kindle, E. M. 1898 A, p. 485.

Leidy, J. 1847 A, p. 265, pl. ii, figs. 1, 4-6. (E. americanus, preoccupied.)

1847 C, p. 328. (E. americanus.)

1851 K, p. 140. (E. americanus.)

1853 E. (E. americanus.)

1854 I, p. 200. (E. americanus.)

1860 B, p. 100, pl. xv, figs. 2-5, 7, 9, 11-15; pl. xvi, figs. 24-26, 30, 31.

1868 A, p. 175.

1869 A, pp. 265, 399. (E. major.)

1871 A, p. 63. (E. major.)

1871 C, p. 360. (E. major.)

1871 F, p. 113.

1873 B, pp. 244, 321, pl. xxxiii, figs. 3-18.

1877 A, p. 212. (E. major.)

1884 A. (E. major.)

1889 F, p. 38, figures. (E. major.)

1890 A, p. 182. (Hippotherium princeps.)

Leidy and Lucas 1896 A, pp. viii, 49; pl. xii, figs. 12, 13. (E. major.)

Miller, G. S. 1899 B, p. 372. (E. major.)

Roger, O. 1896 A, p. 176 (Hipparion princeps); p. 178 (E. major); p. 179 (E. intermedius.)

Skilton, — 1858 A. (E. major.)

Trouessart, E. L. 1898 A, p. 790. (E. major.)

Wailles, B. C. L. 1854 A, p. 286. (E. americanus.)

Wilckens, M. 1884 B, p. 337.

Williston, S. W. 1897 I, p. 303. (E. major.)

1898 I, p. 92. (E. major.)

Woodworth, J. B. 1900 B, p. 459. ("Fossil horse.") Pleistocene; Mississippi, Missouri, South Carolina, New Jersey, Pennsylvania, New York, Massachusetts, Indiana, Illinois, Kentucky, Texas, Kansas, Louisiana, Oregon, Washington, Nevada.

Equus conversidens Owen.

Owen, R. 1869 A, p. 267.

Cope, E. D. 1884 G, p. 179.

Leidy, J. 1869 A, p. 400.
1871 C, p. 360.

Owen, R. 1870 B, pl. lxi, figs. 1, 3.

Roger, O. 1896 A, p. 179.

Trouessart, E. L. 1898 A, p. 791.

Wilckens, M. 1884 B, p. 328.

Pleistocene; Valley of Mexico.

This species is not known to occur within the limits included in this work.

Equus crenidens Cope.

Cope, E. D. 1884 G, pp. 10, 12.

1885 S, p. 1208.

1887 N, p. 1072, fig. 42.

1889 F.

1899 A, p. 255.

Cope and Wortman 1884 A, p. 40.

Felix and Lenk 1891, p. 131.

Roger, O. 1896 A, p. 178.

Trouessart, E. L. 1898 A, p. 790.

Pleistocene; Mexico.

Equus excelsus Leidy.

Leidy, J. 1858 E, p. 26.

Amer. Geologist 1892 A.

Cope, E. D. 1884 G, pp. 10, 13.

1884 JJ, p. 41.

1885 S.

1887 N, p. 1076.

1889 F.

1889 S, p. 980.

1891 J.

1892 C.

1893 A, p. 80, pl. xx, figs. 4, 5; pl. xxii, figs. 4, 5.

Dana, J. D. 1879 A, p. 233.

Dawkins, W. B. 1870 A.

Felix and Lenk 1891 A, pp. 128, 135, pl. xxx, fig. 7.

Hayden, F. V. 1858 B, p. 158.

Leidy, J. 1869 A, pp. 266, 400, pl. xix, fig. 39; pl. xxi, fig. 31.

1870 J, p. 67.

1871 C, p. 360.

1873 B, p. 242. (Syn. of *E. occidentalis*.)

Roger, O. 1896 A, p. 178. (Syn. of *E. occidentalis*.)

Trouessart, E. L. 1898 A, p. 790.

Whitney, J. D. 1879 A.

Wilckens, M. 1884 B, p. 337.

Williston, S. W. 1897 I, p. 303.

1898 I, p. 92.

Pleistocene; South Dakota, Nebraska, Texas, Mexico, Oregon?, Kansas.

Equus fraternus Leidy.

Leidy, J. 1860 B, p. 100, pl. xv, figs. 6, 8, 16-18; pl. xvi, figs. 23, 28.

Conrad, T. A. 1869 A, p. 359.

1871 A.

Cooper, Smith, and De Kay 1831 A, p. 370, in part. ("Equus.")

Cope, E. D. 1869 N, p. 741.

1884 JJ, p. 41.

1885 S, p. 1209.

1892 J, p. 125. (Tomolabis.)

Cope, E. D. 1896 H, p. 465.

1899 A, pp. 255, 257. (*E. fraternus fraternus*.)

Harlan, R. 1835 B, p. 267. (*E. caballus*.)

Hayes, Seth 1895 A.

Kindle, E. M. 1898 A, p. 485.

Leidy, J. 1847 A, p. 263, in part (*E. curvidens*); pl. ii, figs. 2, 3 (*E. americanus*).

1858 C, p. 11. (Description insufficient.)

1869 A, pp. 266, 400.

1871 A, p. 63.

1871 C, p. 360.

1877 A, p. 212.

1889 D, p. 16.

1889 F, p. 38.

1892 A.

Lucas, F. A. 1899 A, p. 764. (*E. fraternus?*.)

Marsh, O. C. 1874 B, p. 255.

Roger, O. 1896 A, p. 178.

Trouessart, E. L. 1898 A, p. 790.

Wilckens, M. 1884 B, p. 336.

Pleistocene; South Carolina, North Carolina, Mississippi, Georgia, Kentucky, Texas, New Jersey, Indiana, Alaska?, Pennsylvania, Louisiana.

Equus giganteus Gidley.

Gidley, J. W., 1901, Bull. Amer. Mus. Nat. Hist., xiv, p. 137, fig. 27.

Cope, E. D. 1885 S, p. 1208, pl. xxxvii, fig. 4. (*E. crenidens*.)

Pleistocene; Texas.

Equus occidentalis Leidy.

Leidy, J. 1865 C, p. 94.

Bowers, S. 1889 A, p. 391.

Cope, E. D. 1878 H, p. 389.

1884 G, pp. 10, 11.

1884 JJ, p. 41.

1885 S.

1887 N, p. 1076.

1889 F.

1889 S, p. 980.

1892 E, p. 252.

1893 A, pp. 66, 81.

1896 H, p. 464.

1899 A, p. 255.

Dana, J. D. 1879 A, p. 233.

Le Conte, J. 1883 A. (*E. occidentalis*, *E. pacificus*.)

Leidy, J. 1869 A, pp. 266, 400. (*E. excelsus*, in part.)

1873 B, pp. 239, 322, pl. xxxiii, figs. 1, 2.

Lydekker, R. 1882 A, p. 72.

Roger, O. 1896 A, p. 178.

Trouessart, E. L. 1898 A, p. 790.

Whitney, J. D. 1879 A, p. 257.

Wilckens, M. 1884 B, p. 337.

Williston, S. W. 1897 I, 303.

1898 I, p. 92.

Pleistocene; California.

Equus pacificus Leidy.

Leidy, J. 1868 D, p. 32.

Gidley, J. W., 1901, Bull. Amer. Mus. Nat. Hist., xiv, p. 116.

Le Conte, J. 1883 A.

Leidy, J. 1869 A, p. 400.

1871 C, p. 360.

1871 D, p. 50.

Pleistocene; Oregon.

***Equus pectinatus* Cope.**

Cope, E. D. 1899 A, pp. 255, 257. (*E. fraternus* *pectinatus*.)

Pleistocene; Pennsylvania, Illinois?

***Equus scotti* Gidley.**

Gidley, J. W. 1900 A, p. 111, figs. 1-3, 5A.

Pleistocene (*Equus* beds); Texas.

***Equus semiplicatus* Cope.**

Cope, E. D. 1893 A, p. 80, pl. xxiii, figs. 2, 3.

1889 F, p. 161. (*E. fraternus*, not of Leidy.)

1899 A, p. 255.

Trouessart, E. L. 1898 A, p. 791.

Pleistocene; Texas.

***Equus tau* Owen.**

Owen, R. 1870 B, p. 565, pl. lxi, fig. 4.

Cope, E. D. 1884 G, p. 12 (*E. tau*); pp. 10, 15 (*E. barcenæi*).

1884 JJ, p. 41. (*E. barcenæi*.)

1885 S. (*E. barcenæi*.)

1889 F. (*E. tau*, *E. barcenæi*.)

1893 A, p. 79.

1899 A, p. 255.

Felix and Lenk 1891 A, pp. 127, 136, pl. xxx, figs. 6, 6a (*E. barcenai*); p. 135 (*E. tau*).

Leidy, J. 1869 A, p. 401.

Owen, R. 1869 A, p. 268. (No description.)

Roger, O. 1896 A, p. 178. (*E. barcenæi*.)

Trouessart, E. L. 1898 A, p. 790.

Wilckens, M. 1884 B, p. 329.

Pleistocene; Mexico, Texas.

Superfamily TAPIROIDEA.

Gill, T. 1872 B, p. 12 (*Tapiroidea*); p. 88 (*Lophiodontoidea*).

LOPHIODONTIDÆ.

By some authors this group is regarded as a subfamily of the *Tapiridæ*.

Cope, E. D. 1879 C, pp. 228, 232.

1879 V, p. 771f.

1881 G, pp. 378, 379, 381.

1881 O.

1884 O, pp. 614, 617.

1887 N, pp. 991, 993.

1889 C, p. 158.

Flower, W. H. 1876 B, xiii, p. 327.

1883 D, p. 428.

Flower and Lydekker 1891 A, p. 373.

Gaudry, A. 1897 A.

Gill, T. 1872 B, p. 12.

Lydekker, R. 1886 A, p. 6.

1886 D, p. 326.

Nicholson and Lydekker 1889 A, pp. 1354, 1364.

Osborn, H. F. 1893 D, p. 37.

1898 I, p. 79.

Osborn and Wortman 1892 A, p. 92 (*Lophiodontidæ*, *Lophiodontinæ*); p. 127 (*Helaletidæ*, *Helaletinæ*).

1895 A, p. 358.

Rütimeyer, L. 1888 A, p. 27.

1891 A, p. 21.

Trouessart, E. L. 1898 A, p. 760.

Woodward, A. S. 1898 B, p. 322.

Wortman, J. L. 1882 B, p. 723.

1883 A, p. 710.

1886 A, p. 478.

Wortman and Earle 1893 A, p. 173. (*Helaletidæ* → *Helaletinæ* + *Colodontinæ*.)

Zittel, K. A. 1893 B, p. 274. (*Lophiodontinæ*.)

LOPHIODON Cuv. Type *L. tapiroides* Cuv.

The following references are given to the literature of the genus *Lophiodon*, the type of its family. No American species are here recognized as belonging to this genus, although several have at times been assigned to it by authors.

Cuvier, G., 1822, *Oss. Foss.*, ed. 2, vol. ii, pt. 1, p. 176.

Blainville, H. M. D. 1864 A, iv, Y, p. 80, plates.

Cope, E. D. 1873 E, p. 595.

1873 H, p. 212.

1881 G, p. 381.

1884 O, p. 618.

1887 N, pp. 994, 998.

Filhol, H. 1885 A.

1888 A.

Flower and Lydekker 1891 A, p. 373.

Gaudry, A. 1877 A.

1878 B, p. 63.

Gervais, P. 1859 A, p. 117.

Leidy, J. 1871 C, p. 357.

1872 B, p. 361.

1872 C, p. 19.

1873 B, p. 219.

Lydekker, R. 1886 A, p. 6.

Maack, G. A. 1865 A, p. 6.

Major, Fors. 1873 A, pp. 102, 204.

Nicholson and Lydekker 1889 A, p. 1354.

Osborn, H. F. 1892 B.

1898 I, p. 87, fig. 5.

Osborn and Wortman 1892 A, p. 131.

1895 A, pp. 358, 361.

Owen, R. 1844 A, p. 224.

1845 B, p. 606.

1848 A, p. 126.

1857 C.

1858 B, p. 78.

1860 E, p. 323.

Pictet, F. J. 1853 A, p. 304.

Pomel, A. 1847 A, p. 203.

Rütimeyer, L. 1862 A.

1891 A, p. 20.

Schlosser, M. 1886 B, p. 27.

1888 A, p. 585.

HEPTODON Cope. Type *Lophiodon ventorum* Cope.

Cope, E. D. 1882 GG.

Branco, W. 1897 A, p. 20.

Cope, E. D. 1884 O, pp. 618, 653.

1887 N, p. 994.

Earle, C. 1893 C, p. 393.

Nicholson and Lydekker 1889 A, p. 1356.

Osborn, H. F. 1892 B, p. 763.

Osborn and Wortman 1892 A, pp. 127-132.

1895 A, p. 358.

Schlosser M. 1886 B, p. 28.

Scott, W. B. 1892 A, p. 431.

Wortman, J. L. 1896 A, p. 85.

Wortman and Earle 1893 A.

Zittel, K. A. 1893 B, p. 275.

Heptodon calciculus Cope.

Cope, E. D. 1880 N, p. 747. (Lophiodon.)

1881 D, p. 197. (Pachynolophus.)

1882 GG.

1884 O, p. 656, pl. xxia, fig. 6.

1887 N, p. 997, fig. 9.

Matthew, W. D. 1899 A, p. 36.

Osborn and Wortman 1892 A, p. 127, fig. 18.

Roger, O. 1896 A, p. 181.

Trouessart, E. L. 1898 A, p. 760.

Wortman, J. L. 1896 A, p. 86.

Wortman and Earle 1893 A, p. 177.

Eocene (Wind River); Wyoming.

Heptodon posticus Cope.

Cope, E. D. 1882 E, p. 187. (Pachynolophus.)

1882 GG.

1884 O, p. 654, pl. lvi, fig. 6.

Steinmann and Döderlein 1890 A, p. 771.

Wilckens, M. 1885 B, p. 209.

Wortman, J. L. 1896 A, p. 85.

Wortman and Earle 1893 A, p. 173.

Zittel, K. A. 1893 B, p. 276.

Matthew, W. D. 1899 A, p. 33.

Roger, O. 1896 A, p. 181.

Trouessart, E. L. 1898 A, p. 760.

Wortman, J. L. 1896 A, p. 86.

Eocene (Wasatch); Wyoming.

Heptodon singularis Cope.

Cope, E. D. 1875 C, p. 19. (Hyrachyus.)

1877 K, p. 267, pl. lxvi, fig. 17. (Hyrachyus.)

1884 O, p. 618, fig. 31.

1887 N, p. 990, fig. 4.

Matthew, W. D. 1899 A, p. 33.

Roger, O. 1896 A, p. 181 (Heptodon); p. 185 (Hyrachyus).

Schlosser, M. 1886 B, p. 28. (Pachynolophus.)

Trouessart, E. L. 1898 A, p. 745 (Hyrachyus?); p. 761 (Heptodon?).

Wortman, J. L. 1896 A, p. 86.

Eocene (Wind River); New Mexico.

Heptodon ventorum Cope.

Cope, E. D. 1880 N, p. 747. (Lophiodon.)

1881 D, p. 197. (Pachynolophus.)

1882 E, p. 187. (Pachynolophus.)

1882 GG.

1884 O, p. 654, pl. xxixa, figs. 4, 5.

1887 N, p. 997, fig. 9.

Matthew, W. D. 1899 A, p. 36.

Roger, O. 1896 A, p. 180.

Trouessart, E. L. 1898 A, p. 760.

Wortman, J. L. 1896 A, p. 86.

Zittel, K. A. 1893 B, p. 275, fig. 217.

Eocene (Wind River); Wyoming.

HELALETES Marsh. Type *H. boops* Marsh.

Marsh, O. C. 1872 I, p. 218.

Cope, E. D. 1879 A, p. 43. (Syn. of *Tapirus*.)

1881 G, p. 381.

1884 O, p. 618 (Helaletes); p. 693 (Desmatotherium).

1887 N, p. 994 (Helaletes, *Dilophodon*); p.

1000 (Desmatotherium).

Flower and Lydekker 1891 A, p. 375.

Gaudry, A. 1897 A, p. 321.

Marsh, O. C. 1877 E.

Nicholson and Lydekker 1889 A, p. 1355.

Osborn, H. F. 1890 D, p. 505.

1892 B, p. 763.

Osborn and Wortman 1892 A, pp. 82, 93, 127, 130.

(Helaletes, *Desmatotherium*, *Dilophodon*.)

1895 A, p. 358, 360.

Schlosser, M. 1886 B, p. 27.

Scott, W. B. 1883 A, p. 46 (*Desmatotherium*, type *D. guyotii*); p. 51 (*Dilophodon*, type *D. minusculus*); p. 53 (Helaletes).

1892 A, p. 431.

Scott and Osborn 1883 A, p. 12. (*Desmatotherium*.)

1887 A, p. 260. (*Desmatotherium*.)

Trouessart, E. L. 1898 A, p. 761. (Helaletes.)

Wortman and Earle 1893 A.

Zittel, K. A. 1893 B, p. 275.

Helaletes boops Marsh.

Marsh, O. C. 1872 I, p. 218.

Cope, E. D. 1873 E, p. 605. (Hyrachyus.)

1873 U, p. 6. (Hyrachyus.)

1884 O, p. 661.

King, C. 1878 A, p. 404.

Matthew, W. D. 1899 A, p. 45.

Osborn and Wortman 1892 A, p. 131.

1895 A, p. 360.

Roger, O. 1896 A, p. 181.

Trouessart, E. L. 1898 A, p. 761.

Wortman and Earle 1893 A, p. 177.

Eocene (Bridger); Wyoming.

Helaletes guyotii (Scott).

Scott, W. B. 1883 A, p. 46, pl. viii. (*Desmatotherium*.)

Cope, E. D. 1883 II, p. 970. (*Desmatotherium*.)

Matthew, W. D. 1899 A, pp. 45, 49.

Osborn, H. F. 1892 B.

Roger, O. 1896 A, p. 181.
 Trouessart, E. L. 1898 A, p. 761.
 Eocene (Bridger); Wyoming. (Uinta); Utah.

Helaletes minusculus (Scott).

Scott, W. B. 1883 A, p. 51, pl. viii, fig. 4. (Dilophodon.)
 Cope, E. D. 1883 II, p. 970. (Dilophodon.)
 Matthew, W. D. 1899 A, p. 45.
 Roger, O. 1896 A, p. 181.
 Trouessart, E. L. 1898 A, p. 961.
 Wortman and Earle 1893 A, p. 180.
 Eocene (Bridger); Wyoming.

Helaletes nanus Marsh.

Marsh, O. C. 1871 D, p. 37. (Lophiodon.)

Cope, E. D. 1873 E, p. 605. (Hyrachyus.)
 1873 U, p. 6. (Hyrachyus.)
 1884 O, p. 661. (Hyrachyus.)
 Leidy, J. 1872 B, p. 361 (Hyrachyus); p. 362 (Lophiodon.)
 1872 C, p. 20. (Hyrachyus.)
 1873 B, pp. 67, 327, pl. ii, fig. 14; pl. vi, fig. 42; pl. xxvi, fig. 11; pl. xxvii, figs. 21, 22. (Hyrachyus.)
 Marsh, O. C. 1872 I, p. 218.
 Matthew, W. D. 1899 A, p. 45.
 Osborn, H. F. 1895 A, p. 505.
 Osborn and Wortman 1895 A, p. 360.
 Trouessart, E. L. 1898 A, p. 761. (Syn. of *H. boops*.)
 Eocene (Bridger); Wyoming.

Colodon Marsh. Type *C. luxatus* Marsh.

Marsh, O. C. 1890 D, p. 524.
 Earle, C. 1893 C, p. 393. (Colodon.)
 Gaudry, A. 1897 A. (Colodon.)
 Osborn, H. F. 1893 D. (Colodon.)
 Osborn and Wortman 1895 A, pp. 358, 362. (Colodon.)
 Scott, W. B. 1892 A, p. 430. (Mesotapirus.)
 Scott and Osborn 1890 A, p. 524. (Mesotapirus, conjectural.)
 Wortman, J. L. 1893 A. (Colodon.)
 Wortman and Earle 1893 A, p. 173. (Colodon, Mesotapirus.)
 Zittel, K. A. 1893 B, p. 275. (Colodon.)

Colodon dakotensis Osb. and Wort.

Osborn and Wortman 1895 A, p. 362, fig. 7. (Colodon.)
 Hatcher, J. B. 1896 B, p. 171, pl. iii, figs. 3, 3 A. (Colodon.)
 Matthew, W. D. 1899 A, p. 56. (Colodon.)
 Trouessart, E. L. 1898 A, p. 761. (Colodon.)
 Oligocene (White River); South Dakota.

Colodon longipes Osb. and Wort.

Osborn and Wortman 1894 A, p. 214. (?Mesohippus.)
 Hatcher, J. B. 1896 B, p. 169. (Syn.? of *Colodon occidentalis*.)
 Matthew, W. D. 1899 A, p. 56. (Colodon.)
 Osborn and Wortman 1895 A, p. 366. (Colodon ?.)
 Roger, O. 1896 A, p. 174. (Mesohippus ?.)
 Trouessart, E. L. 1898 A, p. 761. (Colodon.)
 Oligocene (White River); South Dakota.

Colodon luxatus Marsh.

Marsh, O. C. 1890 D, p. 524. (Colodon.)
 Hatcher, J. B. 1896 B, p. 170. (Syn. of *Colodon occidentalis*.)

Marsh, O. C. 1893 D, p. 411, pl. x. (Colodon.)
 Matthew, W. D. 1899 A, p. 56. (Colodon.)
 Roger, O. 1896 A, p. 181. (Syn. of *Colodon occidentalis*.)
 Wortman and Earle 1893 A, p. 174. (Syn. of *Colodon occidentalis*.)
 Oligocene (White River); South Dakota.
Colodon occidentalis (Leidy).
 Leidy, J. 1868 I, p. 232. (Lophiodon.)
 Hatcher, J. B. 1896 B, p. 170, pl. iii, figs. 2, 6, 7. (Colodon.)
 Leidy, J. 1869 A, pp. 239, 391, pl. xxi, figs. 28-30. (Lophiodon.)
 1870 P, p. 112. (Lophiodon.)
 1871 C, p. 357. (Lophiodon.)
 1873 B, pp. 219, 327 (Lophiodon occidentalis); pl. ii, fig. 1 (Lophiodon oregonensis).
 Matthew, W. D. 1899 A, pp. 56, 63. (Colodon.)
 Osborn and Wortman 1895 A, pp. 362, 365. (Colodon.)
 Roger, O. 1896 A, p. 181. (C. occidentalis.)
 Scott and Osborn, 1890 A, p. 524.
 Trouessart, E. L. 1898 A, p. 762.
 Wortman and Earle 1893 A, p. 174, figs. 6, 7. (Colodon.)
 Oligocene (White River); South Dakota.
 Miocene (John Day); Oregon.

Colodon procuspidatus Osb. and Wort.

Osborn and Wortman 1895 A, pp. 362, 364, fig. 8.
 Hatcher, J. B. 1896 B, p. 170. (Syn.? of *C. occidentalis*.)
 Matthew, W. D. 1899 A, p. 56. (Colodon.)
 Trouessart, E. L. 1898 A, p. 170. (Colodon.)
 Oligocene (White River); South Dakota.

TAPIRIDÆ.

Blainville, H. M. D. 1864 A, iv, Z, p. 1, pls. i-vi.
 Branco, W. 1897 A, p. 19.
 Cope, E. D. 1874 M.
 1879 C, p. 228.
 1881 G, pp. 378, 395.
 1881 O.
 1884 O, pp. 615, 693.
 1887 N.
 Cuvier, G. 1834 A, pp. 273-430, 542, with plates.

Earle, C. 1893 C.
 1896 B.
 Flower, W. H. 1876 B, xiii, p. 328.
 Flower and Lydekker 1891 A; p. 370.
 Gaudry, A. 1897 A.
 Ghigi, A. 1900 A, p. 17.
 Gray, J. E. 1867 A, p. 878. (Tapiridæ, Tapirinæ.)
 1869 A, p. 252 (Tapiridæ); p. 253 (Tapirinæ).
 Hatcher, J. B. 1896 B.

- Huxley, T. H. 1872 A, p. 310.
 Leidy, J. 1871 C, p. 357.
 Lydekker, R. 1886 A, p. 2.
 1896 B.
 Nicholson and Lydekker 1889 A, p. 1354.
 Osborn, H. F. 1890 D, p. 542.
 1893 D, p. 37. (Tapiridæ, Tapirinæ; Systemodontinæ, in part.)
 1898 I, p. 79.
 Osborn and Wortman 1892 A, p. 93. (Systemodontinæ, Tapirinæ.)
 Owen, R. 1845 B, p. 604.
 Pavlov, M. 1887 A, p. 353.
 1888 A, p. 173.

- Roger, O. 1896 A, p. 180.
 Rütimeyer, L. 1888 A, p. 14.
 Schlosser, M. 1886 A, p. 253.
 1886 B, p. 27.
 1888 A.
 Slade, D. D. 1893 A.
 Steinmann and Döderlein 1890 A, p. 771.
 Trouessart, E. L. 1898 A, p. 760 (Tapiridæ); p. 764 (Tapirinæ).
 Woodward, A. S. 1898 B, p. 321.
 Wortman and Earle 1893 A. (Tapiridæ, Tapirinæ; Systemodontinæ, in part.)
 Zittel, K. A. 1893 B, p. 273 (Tapiridæ); p. 276 (Tapirinæ).

HOMOGALAX Hay. Type *Systemodon primævus* Wort.

- Hay, O. P. 1899 A, p. 593.
 Osborn, H. F. 1898 I, p. 87. (Systemodon.)
 Trouessart, E. L. 1898 A, p. 765. (Systemodon.)
 Wortman, J. L. 1896 A. (Systemodon.)
 For the literature of *Systemodon*, which bears more or less on the species here included under *Homogalax*, see under *Eohippus*.

Homogalax primævus (Wort.).

- Wortman, J. L. 1896 A, p. 89, fig. 3. (Systemodon.)
 Hay, O. P. 1899 A, p. 593.
 Matthew, W. D. 1899 A, p. 34. (Systemodon.)
 Osborn and Wortman 1892 A, p. 125. (Systemodon tapirinus, in part.)
 Trouessart, E. L. 1898 A, p. 765. (Systemodon.)
 Eocene (Wasatch); Wyoming.

Homogalax protapirinus (Wort.).

- Wortman, J. L. 1896 A, pp. 89, 90. (Systemodon.)

- Hay, O. P. 1899 A, p. 593.
 Matthew, W. D. 1899 A, p. 34. (Systemodon.)
 Trouessart, E. L. 1898 A, p. 765. (Systemodon.)
 Eocene (Wasatch); Wyoming.

Homogalax semihians (Cope).

- Cope, E. D. 1882 A, p. 184. (Systemodon.)
 1884 O, pp. 619, 622, pl. lvi, figs. 3, 4. (Systemodon.)
 Hay, O. P. 1899 A, p. 593.
 Matthew, W. D. 1899 A, p. 34. (Systemodon.)
 Osborn and Wortman 1892 A, pp. 124, 126. (Systemodon.)
 Roger, O. 1896 A, p. 183. (Systemodon.)
 Scott, W. B. 1892 A, p. 430. (Systemodon.)
 Trouessart, E. L. 1898 A, p. 765. (Systemodon.)
 Wortman, J. L. 1896 A, p. 89. (Systemodon.)
 Eocene (Wasatch); Wyoming.

ISECTOLOPHUS Scott and Osb. Type *I. annectens* Scott and Osb.

- Scott and Osborn 1887 A, p. 260.
 Cope, E. D. 1887 N, p. 994.
 1890 C, p. 470.
 Earle, C. 1893 C.
 Flower and Lydekker 1891 A, p. 374.
 Hatcher, J. B. 1896 B, p. 177.
 Nicholson and Lydekker 1889 A, p. 1355.
 Osborn, H. F. 1890 D, p. 518.
 1892 B, p. 764.
 Osborn, Scott, and Speir 1878 A, p. 54, part. (Helaletes.)
 Scott, W. B. 1892 A, p. 430.
 Wortman and Earle 1893 A.
 Zittel, K. A. 1893 B, p. 277.

Isectolophus annectens Scott and Osb.

- Scott and Osborn 1887 A, p. 260.
 Hatcher, J. B. 1896 B, p. 177.

- Matthew, W. D. 1899 A, p. 49.
 Osborn, H. F. 1890 D, p. 520, pl. x.
 1892 B, p. 764.
 1895 A, p. 98.
 Roger, O. 1896 A, p. 183.
 Trouessart, E. L. 1898 A, p. 765.
 Wortman and Earle 1893 A, p. 171.
 Eocene (Uinta); Wyoming.

Isectolophus latidens Scott and Osb.

- Osborn, Scott, and Speir 1878 A, p. 54. (Helaletes.)
 Hatcher, J. B. 1896 B, p. 177.
 Matthew, W. D. 1899 A, p. 45.
 Osborn, H. F. 1890 D, p. 519.
 Trouessart, E. L. 1898 A, p. 765.
 Wortman and Earle 1893 A, p. 170.
 Eocene (Bridger); Wyoming.

PROTAPIRUS Filhol. Type *P. priscus* Filhol=*P. filholi* Troues.

- Filhol, H. 1877 A, p. 131.
 Cope, E. D. 1887 N, pp. 994, 996.
 Earle, C. 1893 C.
 1896 B, p. 934.
 Filhol, H. 1885 A, p. 1.
 Gaudry, A. 1897 A, p. 320.
 Hatcher, J. B. 1896 B.
 Wortman, J. L. 1893 A.

- Wortman and Earle 1893 A, p. 161
 Zittel, K. A. 1893 B, p. 278.

Protapirus obliquidens Wort. and Earle.

- Wortman and Earle 1893 A, p. 162, figs. 1-4.
 Earle, C. 1893 C, p. 395.
 Hatcher, J. B. 1896 B, p. 162.

Matthew, W. D. 1899 A, p. 56.

Roger, O. 1896 A, p. 183.

Trouessart, E. L. 1898 A, p. 766.

Oligocene (White River); South Dakota.

Protapirus simplex Wort. and Earle.

Wortman and Earle 1893 A, p. 168, fig. 1, A.

Earle, C. 1893 C, p. 394.

Hatcher, J. B. 1896 B, p. 168, pl. iii, figs. 5, 5a.

Matthew, W. D. 1899 A, p. 56.

Roger, O. 1896 A, p. 183.

Trouessart, E. L. 1898 A, p. 766.

Oligocene (White River); South Dakota.

Protapirus validus Hatcher.

Hatcher, J. B. 1896 B, p. 162, pl. ii, figs. 1-4; text figs. 1, 2.

Earle, C. 1896 B, p. 934.

Matthew, W. D. 1899 A, p. 56.

Roger, O. 1896 A, p. 183.

Trouessart, E. L. 1898 A, p. 766.

Oligocene (White River); South Dakota.

TAPIRAVUS Marsh. Type *T. validus* Marsh.

Marsh, O. C. 1877 D, p. 252.

Cope, E. D. 1887 N, pp. 996, 1007.

Earle, C. 1893 C, p. 345.

Hatcher, J. B. 1896 B, p. 178.

Marsh, O. C. 1877 E.

Scott, W. B. 1883 A, p. 50.

Zittel, K. A. 1893 B, p. 278.

Tapiravus rarus Marsh.

Marsh, O. C. 1877 D, p. 252.

King, C. 1878 A, p. 430.

Matthew, W. D. 1899 A, p. 71.

Roger, O. 1896 A, p. 183.

Trouessart, E. L. 1898 A, p. 766.

"Pliocene"; Rocky Mountain region.

Tapiravus validus Marsh.

Marsh, O. C. 1871 F. (Lophiodon.)

Hatcher, J. B. 1896 B, p. 178.

Marsh, O. C. 1877 D, p. 252.

Trouessart, E. L. 1898 A, p. 766.

Miocene; New Jersey.

TANYOPS Marsh. Type *T. undans* Marsh.

Marsh, O. C. 1894 M, p. 348.

Tanyops undans Marsh.

Marsh, O. C. 1894 M, p. 348.

Miocene; South Dakota.

TAPIRUS Brisson. Type *Hippopotamus terrestris* Linn.

Brisson, 1762, Regnum Anim., p. 176. (Fide C. H. Merriam.)

Blainville, H. M. D. 1864 A, iv, Z, p. 1, plates.

Branco, W. 1897 A, p. 20.

Cope, E. D. 1873 E, p. 594.

1873 H, p. 212.

1881 G, p. 395.

1887 N, p. 1007.

1889 C, p. 254.

Cope and Wortman 1884 A, p. 26.

Cuvier, G. 1834 A, iii, pp. 273-430, with plates.

Döderlein, L. 1878 A.

Earle, C. 1893 A.

1893 C.

Flower and Lydekker 1891 A, p. 370.

Ghigi, A. 1900 A, p. 17.

Gray, J. E. 1867 A, p. 879.

1869 A, p. 254.

Hatcher, J. B. 1896 A, p. 173.

Huxley, T. H. 1872 A, p. 311.

Kowalevsky, W. 1873 A, pp. 218, 222.

Leuthardt, F. 1891 A, p. 113.

Lydekker, R. 1886 A, p. 3.

Meyer, H. 1867 A.

Nicholson and Lydekker 1889 A, p. 1354.

Owen, R. 1845 B, p. 604.

1866 B, p. 444, figs. 299, 301.

1868 A, p. 357.

Paulli, S. 1900 A, p. 182.

Pictet, F. J. 1853 A, p. 301.

Rütimeyer, L. 1862 A.

Scott, W. B. 1892 A, p. 431.

Trouessart, E. L. 1898 A, p. 767.

Wortman and Earle 1893 A.

Zittel, K. A. 1893 B, p. 278.

Tapirus haysii Leidy.

Leidy, J. 1860 B, p. 106, pl. xvii, figs. 4, 7-10.

Cope, E. D. 1869 E, p. 176, pl. iii, fig. 6.

1869 J.

1871 I, p. 95.

1895 F, p. 447.

1895 G, p. 597.

1899 A, p. 253.

Cope and Wortman 1884 A, p. 26.

Hays, I. 1852 A. ("Tapir.")

Leidy, J. 1852 G. (No description.)

1852 I. (No description.)

1860 B, p. 106, pl. xvii, figs. 4, 7-10.

1873 B, p. 391.

Meyer, H. 1867 A, p. 169.

Roger, O. 1896 A, p. 184.

Trouessart, E. L. 1898 A, p. 769. [T. (Elasmognathus).]

Wailles, B. C. L. 1854 A, p. 286.

Pleistocene; South Carolina, Mississippi, Virginia, Pennsylvania, Indiana.

Tapirus terrestris (Linn.).

Linnæus, C., 1758, Syst. Nat., ed. 10, i, p. 74. (Hippopotamus.)

Unless otherwise indicated, the following authors call the species *T. americanus*.

Blake, W. P. 1868 A. ("Tapir.")

Carpenter, W. M. 1846 A, p. 247, figs. 3, 4. ("Tapir.")

Cope, E. D. 1871 I, p. 95.

Cope and Wortman 1884 A, p. 26. (T. terrestris.)

Earle, C. 1893 A.

Ghigi, A. 1900 A, p. 22.

Gray, J. E. 1867 A, p. 879. (T. terrestris.)

- Hatcher, J. B. 1896 B, p. 174.
 Holmes, F. S. 1858 B.
 1859 A, p. 183.
 Kindle, E. M. 1898 A, p. 485. (T. terrestris?.)
 Leidy, J. 1849 A.
 1860 B, p. 106, pl. xvii, figs. 1-3, 6, 11, 12.
 1869 A, p. 391.
 1884 B.
 1889 B.
 1889 E, p. 19.
 1892 A.

- Roger, O. 1896 A, p. 185.
 Wailes, B. C. L. 1854 A, App., p. 285.
 Wheatley, C. M. 1871 A. ("Tapir.")
 Whitney, J. D. 1879 A, p. 250.
 Pleistocene; Virginia, Illinois, California, Texas, Louisiana, Kentucky, Mississippi, Indiana, Ohio, South Carolina.
 Prof. E. D. Cope (1899 A, p. 253) refers all specimens of fossil *Tapirus* found in the United States to *T. haysii*.

Superfamily BRONTOTHERIOIDEA.

- Osborn, H. F. 1898 I, p. 79. (Titanotheroidea.)

BRONTOTHERIIDÆ.

- Marsh, O. C. 1873 H, p. 486. (Brontotheridæ.)
 Brandt, J. F. 1878 A, pp. 10, 19. (Brontotherinæ.)
 Cope, E. D. 1881 G, pp. 378, 379, 397. (Menodontidæ.)
 1884 O, pp. 615, 713. (Menodontidæ.)
 1887 L, p. 926. (Menodontidæ.)
 1887 N. (Menodontidæ.)
 1889 C, p. 158. (Menodontidæ.)
 1898 B, p. 135. (Menodontidæ.)
 Earle, C. 1892 C, p. 273. (Titanotheriidæ.)
 Flower, W. H. 1876 B, xiii, p. 327. (Titanotheriidæ.)
 1876 C, p. 109. (Titanotheriidæ.)
 Flower and Lydekker 1891 A, p. 413. (Titanotheriidæ.)
 Gervais, P. 1876 B. (Brontotherides.)
 Hatcher, J. B. 1893 B, p. 216. (Titanotheriidæ.)
 Lydekker, R. 1896 B, pp. 170, 377. (Titanotheriidæ.)
 Marsh, O. C. 1874 A, p. 66. (Brontotheridæ.)
 1874 D, p. 81. (Brontotheridæ.)
 1875 B, p. 245. (Brontotheridæ.)
 1876 C. (Brontotheridæ.)
 1876 G, p. 60. (Brontotheridæ.)
 1877 E. (Brontotheridæ.)

- Marsh, O. C. 1884 F, p. 190. (Brontotheridæ.)
 1887 B, p. 336. (Brontotheridæ.)
 1889 A, p. 163. (Brontotheridæ.)
 1889 H. (Brontotheridæ.)
 1895 D, p. 498. (Brontotheridæ.)
 1897 D, p. 166. (Brontotheridæ.)
 Nature 1874 A.
 Nicholson and Lydekker 1889 A, p. 1374. (Titanotheriidæ.)
 Osborn, H. F. 1890 D, p. 514. (Titanotheriidæ.)
 1893 D. (Titanotheriidæ.)
 1897 D. (Titanotheriidæ.)
 1898 I, p. 79. (Titanotheriidæ.)
 1900 C, p. 570. ("Titanotheres.")
 Osborn and Wortman 1892 A, p. 93. (Titanotheriidæ.)
 Roger, O. 1896 A, p. 192. (Titanotheridæ.)
 Schlosser, M. 1886 B, p. 31. (Menodontidæ.)
 1888 A, p. 588. ("Brontotherien.")
 Scott and Osborn 1887 B, p. 157. (Menodontidæ.)
 Steinman and Döderlein 1890 A, p. 777. (Brontotheriidæ.)
 Woodward, A. S. 1898 B, p. 329. (Titanotheriidæ.)
 Zittel, K. A. 1893 B, p. 298. (Titanotheriidæ.)

LAMBOTHERIIDÆ.

- Earle, C. 1892 C, p. 274. (Palæosyopinae.)
 Flower and Lydekker 1891 A, p. 413. (Lambdotheriidæ.)
 Nicholson and Lydekker 1889 A, p. 1371. (Lambdotheriidæ.)
 Osborn, H. F. 1893 D, p. 37.

- Osborn and Wortman 1892 A, p. 93.
 Roger, O. 1896 A, p. 192.
 Steinmann and Döderlein 1890 A, p. 777.
 Trouessart, E. L. 1898 A, p. 737.
 Zittel, K. A. 1893 B, p. 300.

LAMBOTHERIUM Cope. Type *L. popoagicum* Cope.

- Cope, E. D. 1880 N, p. 746.
 1881 G, p. 396.
 1884 O, pp. 694, 709.
 1887 N.
 Earle, C. 1892 C.
 Flower and Lydekker 1891 A, p. 413.
 Nicholson and Lydekker 1889 A, p. 1372.
 Osborn, H. F. 1897 A.
 1897 D.
 Schlosser, M. 1886 B, p. 19.
 1887 A, p. 576.
 Scott, W. B. 1892 A, p. 432.
 Wortman, J. L. 1883 A, p. 710.
 1886 A, p. 480.
 Zittel, K. A. 1893 B, p. 300.

Lambdotherium popoagicum Cope.

- Cope, E. D. 1880 N, p. 746.
 1881 D, p. 196.
 1884 O, pp. 710, pl. xxix a, fig. 7; pl. lviii, figs. 3-5.
 1887 N, p. 1060, figs. 24, 26.
 1887 S, p. 275, pl. vii, figs. 5, 6.
 Matthew, W. D. 1899 A, p. 36.
 Osborn, H. F. 1897 A.
 1897 G, p. 256.
 Roger, O. 1896 A, p. 192.
 Trouessart, E. L. 1898 A, p. 737.
 Eocene (Wind River); Wyoming, Colorado.

LIMNOHYOPS Marsh. Type *L. laticeps* Marsh.

Marsh, O. C. 1890 D, p. 525.

Cary, A. 1892 A.

Cope, E. D. 1873 E, p. 593. (Limnohyus.)

1881 G, p. 396. (Limnohyus.)

1884 O, pp. 697, 705. (Limnohyus.)

1887 N, p. 1061. (Limnohyus.)

Earle, C. 1891 B, p. 113.

1892 C, pp. 270, 276, 350.

Leidy, J. 1872 H, p. 241. (Limnohyus, type *L. laticeps*, not Limnohyus Marsh.)

1873 B, pp. 57, 323. (Limnohyus.)

Marsh, O. C. 1872 G, p. 124. (Palæosyops, type *P. laticeps*, not Palæosyops Leidy, 1870.)

Matthew, W. D. 1899 A, p. 47. (Syn. of Palæosyops.)

Osborn, Scott, and Speir 1878 A, p. 41. (Limnohyus.)

Schlosser, M. 1886 B, p. 18. (Limnohyus.)

Zittel, K. A. 1893 B, p. 303.

Limnohyops fontinalis (Cope).

Cope, E. D. 1873 B, p. 35. (Palæosyops.)

1873 E, p. 594. (Limnohyus.)

1884 O, p. 707, pl. xlix, fig. 9; pl. l, fig. 4; pl.

lviii, figs. 4, 5. (Limnohyus.)

Earle, C. 1891 B, p. 115.

1892 C, p. 368.

Matthew, W. D. 1899 A, p. 47. (Palæosyops.)

Roger, O. 1896 A, p. 193.

Trouessart, E. L. 1898 A, p. 738.

Eocene (Bridger); Wyoming.

Limnohyops laticeps Marsh.

Marsh, O. C. 1872 G, p. 122. (Palæosyops.)

Cope, E. D. 1884 O, p. 707. (Limnohyus.)

Earle, C. 1891 B, p. 114.

1892 C, pp. 269, 351, pl. xi, figs. 8, 9; pl. xii, figs. 24-27; pl. xiv, figs. 39-42; p. 330, pl. xii, figs. 14-16; pl. xiv, figs. 43, 44. (Palæosyops minor, not of Marsh.)

Leidy, J. 1873 B, pp. 28-45 (in part); pl. iv, figs. 3-6; pl. v, figs. 10, 11; pl. xxiv, figs. 6, 7 (Palæosyops paludosus); pp. 58, 326, pl. xxiii, fig. 13 (Limnohyus.)

Marsh, O. C. 1884 F, fig. 68. (Palæosyops.)

1890 D, p. 525.

Matthew, W. D. 1897 A, p. 57. (Palæosyops.)

1899 A, p. 47. (Palæosyops.)

Osborn, Scott, and Speir 1878 A, p. 42. (Limnohyus.)

Roger, O. 1896 A, p. 193.

Trouessart, E. L. 1898 A, p. 738.

Eocene (Bridger); Wyoming.

PALÆOSYOPS Leidy. Type *P. paludosus* Leidy.

Leidy, J. 1870 Q, p. 113.

Cope, E. D. 1873 E, p. 591.

1881 G, p. 396.

1884 O, pp. 694, 697.

1887 N, p. 1061.

1892 R.

Earle, C. 1891 B.

1892 C.

1895 A.

Flower, W. H. 1876 B, xiii, p. 327.

Hatcher, J. B. 1895 A, p. 1090. (Manteoceras, type *M. vallidens*=*P. manteoceras* Osb., not *P. vallidens* Cope.)

Leidy, J. 1871 C, p. 354.

1871 G.

1872 B, p. 358.

1872 H, p. 241.

1873 B, p. 27, pl. xxxi, fig. 1.

Marsh, O. C. 1872 G, p. 124. (Limnohyus, type *L. robustus*.)

1877 E. (Limnohyus.)

Matthew, W. D. 1897 A.

Nicholson and Lydekker 1889 A, p. 1372.

Osborn, H. F. 1883 A, p. 31.

1890 D, pp. 513, 553.

1895 A, p. 87. (Manteoceras=*Telmathegium*.)

1897 D.

Osborn, Scott, and Speir 1878 A, p. 27.

Osborn and Wortman 1892 A, p. 132.

Schlosser, M. 1886 B, p. 18.

Scott, W. B. 1886 A, p. 307.

1891 B, p. 371 seq.

1892 A, p. 432.

Steinmann and Döderlein 1890 A, p. 777.

Woodward, A. S. 1898 B, p. 332.

Zittel, K. A. 1893 B, p. 301.

Palæosyops humilis Leidy.

Leidy, J. 1872 G.

1872 A.

1872 H, p. 242. (Limnohyus.)

1873 B, pp. 58, 326, pl. xxiv, fig. 8.

Matthew, W. D. 1899 A, p. 47.

Roger, O. 1896 A, p. 193.

Trouessart, E. L. 1898 A, p. 739.

Eocene (Bridger); Wyoming.

Palæosyops junior Leidy.

Leidy, J. 1872 J, p. 277.

1873 B, pp. 57, 326.

Matthew, W. D. 1899 A, p. 47.

Roger, O. 1896 A, p. 193.

Trouessart, E. L. 1898 A, p. 739.

Eocene (Bridger); Wyoming.

Probably belongs to *P. paludosus*.

Palæosyops lævidens Cope.

Cope, E. D. 1873 E, p. 591. (Limnohyus.)

1884 O, pp. 699, 701, pl. l, figs. 1-3.

Earle, C. 1892 C, p. 317.

Leidy, J. 1872 B, p. 359. (*P. paludosus*, *vide* Cope.)

Matthew, W. D. 1899 A, p. 47. (Syn. of *P. laticeps*.)

Roger, O. 1896 A, p. 192.

Trouessart, E. L. 1898 A, p. 738.

Eocene (Bridger); Wyoming.

Palæosyops longirostris Earle.

- Earle, C. 1892 C, p. 338.
 Matthew, W. D. 1899 A, p. 47. (Syn.? of *Telmatotherium megarhinum*.)
 Roger, O. 1896 A, p. 193.
 Trouessart, E. L. 1898 A, p. 739.
 Eocene (Bridger); Wyoming.

Palæosyops paludosus Leidy.

- Leidy, J. 1870 Q, p. 113.
 Cope, E. D. 1873 B, p. 35. (P. lævidens.)
 1873 E, pp. 592, 593. (P. major, *Limnohyops paludosus*, L. diaconus.)
 1873 U, p. 4. (P. diaconus sp. nov.)
 1884 O, p. 105 (P. paludosus); pp. 698, 699, 701, pl. li. fig. 2; pl. lii, figs. 1, 2 (P. major); p. 706, pl. li, fig. 3 (L. diaconus).
 1887 N, p. 1062, fig. 27. (P. major.)
 Earle, C. 1891 B, p. 115. (L. diaconus, invalid.)
 1892 C, p. 279, pl. x, fig. 1; pl. xii, figs. 17-23; pl. xiii; pl. xiv, figs. 45-49, and text figures.
 1895 A, p. 624.
 King, C. 1878 A, p. 404.
 Leidy, J. 1871 B, p. 373. (P. major.)
 1871 C, p. 355.
 1871 I.
 1871 K, p. 229. (P. major; orig. description.)
 1872 B, pp. 359, 365. (P. major.)
 1872 G, p. 168.

- Leidy, J. 1872 H, p. 241. (P. major.)
 1873 B, pp. 28, 325, pl. iv, figs. 1, 2, 7, 8; pl. v, figs. 4-11; pl. xix, figs. 1-4; pl. xx, figs. 1-7; pl. xxiii, figs. 3-6; pl. xxiv, figs. 6, 7; pl. xxix, fig. 5 (P. paludosus); pp. 45, 326, pl. xx, fig. 8; pl. xxiii, figs. 1, 2, 7-12, 14-16; pl. xxiv, figs. 1-5 (P. major).
 1873 E, p. 592. (P. major.)
 L. P. B. 1885 A, p. 191, fig. 24. (P. robustus.)
 Marsh, O. C. 1872 G, pp. 122, 124 (P. paludosus); p. 124 (P. robustus sp. nov.).
 1885 B, fig. 105. (P. robustus.)
 1885 F, fig. 69. (P. robustus.)
 Matthew, W. D. 1897 A, p. 57.
 1899 A, p. 46.
 Osborn, H. F. 1898 Q, p. 11.
 Osborn, Scott, and Speir 1878 A, p. 27, pl. ii, figs. 1-13; pl. iii, fig. 8; pl. v (P. major); p. 34, pl. i; pl. iii, figs. 1-9 (P. paludosus).
 Roger, O. 1896 A, p. 192 (P. paludosus); p. 193 (*Limnohyops diaconus*).
 Trouessart, E. L. 1898 A, p. 738. (P. paludosus, *Limnohyops diaconus*.)
 Zittel, K. A. 1893 B, p. 301, fig. 242 (P. major); p. 302, fig. 244 (P. paludosus).
 Eocene (Bridger); Wyoming.

Palæosyops ultimus Matth.

- Matthew, W. D. 1897 A, p. 57. (No description.)
 1899 A, p. 50. (No description.)
 Eocene (Uinta); Utah.

TELMATHERIUM Marsh.**Type *T. validum* Marsh.**

- Marsh, O. C. 1872 G, p. 123.
 Cope, E. D. 1879 W, p. 33. (*Leurocephalus*.)
 1881 G, p. 396. (*Leurocephalus*.)
 1884 O, p. 694. (*Leurocephalus*.)
 1887 N, p. 1061. (*Leurocephalus*.)
 Earle, C. 1891 B, p. 115. (*Telmatotherium*.)
 1892 C, pp. 269, 341. (*Telmatotherium*.)
 1895 A, p. 627. (*Telmatotherium*.)
 Hatcher, J. B. 1895 A. (*Telmatotherium*.)
 Leidy, J. 1873 B, p. 323. (Syn. of *Palæosyops*.)
 Marsh, O. C. 1880 H, p. 10. (*Telmatotherium*.)
 Osborn, H. F. 1895 A, p. 82. (*Telmatotherium*.)
 1897 D. (*Telmatotherium*.)
 Osborn, Scott, and Speir 1878 A, p. 42. (*Leurocephalus*, type *L. cultridens*.)
 Scott, W. B. 1892 A, p. 432.
 Zittel, K. A. 1893 B, p. 303. (*Telmatotherium*.)

Telmatherium boreale (Cope).

- Cope, E. D. 1880 N, p. 746. (*Palæosyops*.)
 1881 D, p. 196 (*Palæosyops*); p. 196 (*Lambdotherium brownianum*).
 1884 O, pp. 699, 703, pl. lviii, fig. 3 (*Palæosyops*); p. 709, pl. lvii, fig. 10 (*Lambdotherium brownianum*).
 Earle, C. 1892 C, pp. 319, 384. (*Palæosyops*.)
 Matthew, W. D. 1897 A, p. 57. (*Palæosyops*.)
 1899 A, p. 36. (*Telmatotherium*.)
 Osborn, H. F. 1897 D.
 Osborn and Wortman 1892 A, p. 132, fig. 19. (*Palæosyops*.)

- Roger, O. 1896 A, p. 193. (*Palæosyops borealis*, *Lambdotherium brownianum*.)
 Trouessart, E. L. 1898 A, p. 737 (*Lambdotherium brownianum*); p. 738 (*Palæosyops*).
 Eocene (Wind River); Wyoming.

Telmatherium cultridens (Scott and Osb.).

- Osborn, Scott, and Speir 1878 A, p. 42, pl. iv. (*Leurocephalus*.)
 Earle, C. 1891 B, p. 116. (*Telmatotherium*.)
 1892 C, pp. 269, 343, pl. x, fig. 3; pl. xii, figs. 12, 13. (*Telmatotherium*.)
 Matthew, W. D. 1897 A, p. 58. (*Telmatotherium*.)
 1899 A, p. 47. (*Telmatotherium*.)
 Osborn, H. F. 1895 A, pp. 83, 95. (*Telmatotherium*.)
 Osborn and Wortman 1892 A, p. 134. (*Telmatotherium*.)
 Roger, O. 1896 A, p. 193.
 Trouessart, E. L. 1898 A, p. 739. (*Telmatotherium*.)
 Eocene (Bridger); Wyoming.

Telmatherium diploconum Osborn.

- Osborn, H. F. 1895 A, p. 85, fig. 6. (*Telmatotherium*.)
 Matthew, W. D. 1899 A, p. 50. (Variety minus.)
 Roger, O. 1896 A, p. 193.
 Trouessart, E. L. 1898 A, p. 740. (*Telmatotherium*.)
 Eocene (Uinta); Utah.

Telmatherium hyognathum (Scott and Osb.).

- Scott and Osborn 1890 A, p. 513. (Palæosyops.)
 Earle, C. 1891 B, p. 116. (Palæosyops.)
 1892 C, p. 348, pl. x, figs. 10, 11. (Telmatotherium.)
 Matthew, W. D. 1897 A, p. 57. (Telmatotherium.)
 1899 A, p. 47 (Syn. of *T. validum*); p. 50 (Telmatotherium hyognathum).
 Osborn, H. F. 1895 A, pp. 83, 87. (Telmatotherium.)
 Roger, O. 1896 A, p. 193.
 Trouessart, E. L. 1898 A, p. 740. (Telmatotherium.)
 Eocene (Bridger); Wyoming: (Uinta); Utah.

Telmatherium megarhinum (Earle).

- Earle, C. 1891 A, p. 45. (Palæosyops.)
 1891 B, p. 117. (Palæosyops.)
 1892 C, p. 321, pl. x, fig. 2; pl. xi, figs. 4-7 (Palæosyops megarhinum); p. 330, pl. xii, figs. 14-16; pl. xiv, figs. 43, 44 (P. minor, *vide* Wortman *in litt.*).
 1895 A, p. 623. (Palæosyops.)
 Leidy, J. 1873 B, pp. 28-45, in part; pl. iv, figs. 3-6; pl. v, figs. 10, 11; pl. xxiv, figs. 6, 7. (Palæosyops paludosus, *vide* Earle.)
 Matthew, W. D. 1899 A, p. 47. (Telmatotherium.)
 Osborn, H. F. 1895 A, pp. 83, 84. (Telmatotherium.)
 Roger, O. 1896 A, p. 193.

- Trouessart, E. L. 1898 A, p. 738, in part (Palæosyops minor); p. 739 (P. megarhinum).
 Eocene (Bridger); Wyoming.

Telmatherium validum Marsh.

- Marsh, O. C. 1872 G, p. 123.
 Cope, E. D. 1884 O, p. 699, in part; pl. li, fig. 1. (Palæosyops validens.)
 Earle, C. 1891 B, p. 116. (Telmatotherium.)
 1892 C, p. 342. (Telmatotherium.)
 Matthew, W. D. 1899 A, p. 47. (Telmatotherium.)
 Osborn, H. F. 1895 A, pp. 82, 94. (Telmatotherium.)
 Osborn, Scott, and Speir 1878 A, p. 40. (Palæosyops validens.)
 Roger, O. 1896 A, p. 193. (T. validum, T. validens.)
 Trouessart, E. L. 1898 A, p. 739. (Telmatotherium.)
 Eocene (Bridger); Wyoming.

Telmatherium validens (Cope).

- Cope, E. D. 1872 S, p. 487. (Palæosyops.)
 1873 E, p. 592. (Palæosyops.)
 1884 O, p. 699, pl. lii, fig. 3; pl. liii, fig. 1 (Palæosyops.)
 Earle, C. 1892 C, p. 316. (Palæosyops.)
 Matthew, W. D. 1899 A, p. 47. (Telmatotherium.)
 Trouessart, E. L. 1898 A, p. 739.
 Eocene (Bridger); Wyoming.

DOLICHORHINUS Hatcher. Type *Telmatotherium cornutum* Osb.

- Hatcher, J. B. 1895 A, p. 1090.
 Trouessart, E. L. 1898 A, p. 740.

Dolichorhinus cornutus (Osb.).

- Osborn, H. F. 1895 A, p. 90, figs. 10, 11. (Telmatotherium.)

- Hatcher, J. B. 1895 A, p. 1090.
 Matthew, W. D. 1897 A, p. 58. (Telmatotherium.)
 1899 A, p. 50. (Telmatotherium.)
 Roger, O. 1896 A, p. 193. (Telmatotherium.)
 Trouessart, E. L. 1898 A, p. 740.
 Eocene (Uinta); Utah.

MANTEOCERAS Hatcher. Type *Palæosyops manteoceras* Osb.

- Hatcher, J. B. 1895 A, p. 1090.

Manteoceras manteoceras (Osb.).

- Osborn, H. F. in Matthew, W. D. 1899 A, p. 47. (Palæosyops.)
 Hatcher, J. B. 1895 A, p. 1089, pl. xxxix, fig. 2 (Telmatotherium validens, not of Cope); p. 1090 (made type of Manteoceras.)

- Matthew, W. D. 1899 A, pp. 47, 50. (Palæosyops.)
 Osborn, H. F. 1895 A, pp. 83, 87, figs. 7-9. (Telmatotherium validens, not of Cope.)
 Eocene (Bridger); Wyoming. (Uinta); Utah.

DIPLACODON Marsh. Type *D. elatus* Marsh.

- Marsh, O. C. 1875 B, p. 246.
 Cope, E. D. 1881 G, p. 397.
 1884 O, p. 713.
 1887 N, p. 1063.
 1890 C, p. 470.
 Earle, C. 1892 C.
 Hatcher, J. B. 1895 A. (Diplacodon, Protitanotherium.)
 Marsh, O. C. 1884 F, p. 172.
 1889 A, p. 165.
 Matthew, W. D. 1897 A, p. 58.
 Nicholson and Lydekker 1889 A, p. 1374.
 Osborn, H. F. 1890 D, pp. 512, 553.
 1897 D.

- Schlosser, M. 1886 B, p. 19.
 Scott, W. B. 1891 B, p. 371 *et seq.*
 1892 A, p. 432.
 Scott and Osborn 1887 A, p. 263.
 Steinmann and Döderlein 1890 A, p. 777.
 Zittel, K. A. 1893 B, p. 303.

Diplacodon elatus Marsh.

- Marsh, O. C. 1875 B, p. 246.
 King, C. 1878 A, p. 407.
 Marsh, O. C. 1889 H.
 Matthew, W. D. 1899 A, p. 50.
 Osborn, H. F. 1890 D, p. 514, pls. viii, ix.
 Roger, O. 1896 A, p. 193.

Scott and Osborn 1887 A, p. 262.

Trouessart, E. L. 1898 A, p. 740.

Eocene (Uinta); Utah.

Diplacodon emarginatus Hatcher.

Hatcher, J. B. 1895 A, p. 1085, pl. xxxviii, figs. 1-4.

Matthew, W. D. 1899 A, p. 50.

Trouessart, E. L. 1898 A, p. 740.

Eocene (Uinta); Utah.

Hatcher, as cited, has proposed for this species, under certain contingencies, the new generic name *Protitanotherium*.

Dæodon Cope. Type *D. shoshonensis* Cope.

Cope, E. D. 1879 D, p. 77.

1881 G, p. 397.

1884 O, p. 713.

1887 N, p. 1063.

Roger, O. 1896 A, p. 194. (Syn. of *Titanotherium*.)

Trouessart, E. L. 1898 A, p. 740. (Syn. of *Titanotherium*.)

Zittel, K. A. 1893 B, p. 304. (Daledon; syn. of *Titanotherium*.)

Dæodon shoshonensis Cope.

Cope, E. D. 1879 D, p. 77.

1879 B, p. 58.

Matthew, W. D. 1899 A, p. 63.

Roger, O. 1896 A, p. 194. (*Titanotherium*.)

Trouessart, E. L. 1898 A, p. 740. (*Titanotherium*.)

Miocene (John Day); Oregon.

BRONTOTHERIINÆ¹

Brandt, J. F. 1878 A, pp. 10, 19. (*Brontotheriinae*.)

Earle, C. 1892 C, p. 274. (*Titanotheriinae*.)

Osborn, H. F. 1893 D. (*Titanotheriinae*.)

1900 F, p. 94. ("Titanotheres.")

Osborn and Wortman 1892 A, p. 93. (*Titanotheriinae*.)

Roger, O. 1896 A, p. 194. (*Titanotheriinae*.)

Zittel, K. A. 1893 B, p. 304. (*Titanotheriinae*.)

Megacerops Leidy. Type *M. coloradensis* Leidy.

Leidy, J. 1870 D, p. 2.

Cope, E. D. 1873 E, pp. 564, 585. (*Megaceratops*.)

1873 F, p. 66. (*Megaceratops*.)

1873 K, p. 102. (*Megaceratops*.)

1873 CC, p. 14. (*Megaceratops*.)

1887 N, p. 1063. (Syn. of *Menodus*.)

1889 I, p. 153. (*Haplacodon*, type *Menodus angustigenis* Cope.)

1891 A, p. 9. (*Menodus*, in part.)

Earle, C. 1892 C, p. 296. (*Haplacodon*.)

Leidy, J. 1871 C, p. 352. (*Megacerops*.)

1873 B, pp. 239, 335.

1874 B. (Syn. of *Titanotherium*.)

Marsh, O. C. 1873 F, p. 295.

1874 A.

1875 B, p. 245.

1876 C, p. 338.

1887 B, p. 331. (Allops, type *A. serotinus*.)

1889 A, p. 165. (Allops, *Megacerops*.)

1890 D, p. 523. (*Diplocionus*, type *D. amplus*.)

Nicholson and Lydekker 1889 A, p. 1374.

Osborn, H. F. 1890 D, pp. 513, 542. (Syn. of *Titanotherium*.)

1896 B. (*Titanotherium*, in part.)

Scott and Osborn 1887 A, pp. 255, 262. (*Menodus*, in part.)

1887 B, p. 157. (Syn. of *Menodus*.)

Trouessart, E. L. 1898 A, p. 740. (Syn. of *Titanotherium*.)

Osborn, H. F. 1896 B, pp. 192, 193. (*Titanotherium*.)

Roger, O. 1896 A, p. 195. (*Titanotherium*.)

Trouessart, E. L. 1898 A, p. 742. (Syn. of *Titanotherium montanum*.)

Oligocene (White River); South Dakota.

Megacerops angustigenis (Cope).

Cope, E. D. 1886 U, p. 81. (*Menodus*.)

Ami, H. M. 1891 A. (*Menodus*.)

Cope, E. D. 1887 N, p. 1067. (*Menodus*.)

1889 I, p. 153. (Type of *Haplacodon*.)

1889 O, p. 628. (*Menodus syceras*.)

1891 A, p. 13, pl. v, figs. 1, 2; pl. vi, fig. 2; pl. vii, fig. 1; pl. xi, fig. 1?; pl. xii, fig. 4?; pl. xiii, figs. 1?, 4?, 6?, 8? (*Menodus angustigenis*); p. 18, pl. vii, fig. 2?; pl. viii, fig. 4? (*M. syceras*).

Matthew, W. D. 1899 A, p. 58. (*Titanotherium*.)

Osborn, H. F. 1896 B, p. 184 (*Titanotherium angustigenis*); pp. 178, 193 (*T. syceras*, a syn. of *T. acer*).

Roger, O. 1896 A, p. 194 (*Titanotherium syceras*); p. 195 (*T. angustigenis*).

Trouessart, E. L. 1898 A, p. 741 (*Titanotherium angustigenis*); p. 743 (*T. syceras*, a syn. of *T. acer*).

Oligocene (White River); Swift Current Creek, Canada.

Megacerops coloradensis Leidy.

Leidy, J. 1870 D.

Cope, E. D. 1873 E, p. 585. (*Megaceratops coloradensis*.)

Megacerops? amplus (Marsh).

Marsh, O. C. 1890 D, p. 523. (*Diplocionus*.)

¹In the arrangement of the genera and species of the Brontotheriinae the writer has had the benefit of the conclusions arrived at by Prof. H. F. Osborn, at the date of going to press, in his studies in the preparation of his forthcoming monograph of the Titanotheres.

- Cope, E. D. 1873 F, p. 66. (*Megaceratops coloradoensis*.)
 1887 N, p. 1063. (*Megaceratops coloradoensis*.)
 1891 A, p. 9 (*Menodus coloradoensis*); p. 10, pl. vi, fig. 1; pl. viii, figs. 1-3; pl. ix, figs. 2, 3; pl. x, fig. 2; pl. xii, fig. 1; pl. xiii, figs. 5, 7 (*Menodus? americanus*); p. 10, pl. ix, fig. 1; pl. x, fig. 3; pl. xii, figs. 2, 3; pl. xiii, fig. 3 (*Menodus? proutii*).
- Leidy, J. 1871 C, p. 352.
 1873 B, pp. 239, 335, pl. i, figs. 2, 3; pl. ii, fig. 2.
- Marsh, O. C. 1873 F, p. 296.
 1874 A, p. 81.
 1897 C, p. 527.
- Matthew, W. D. 1899 A, p. 57. (*Titanotherium*.)
 Osborn, H. F. 1890 D, p. 15, p. 513. (*Titanotherium*.)
 1896 B, p. 171, text figure; p. 175, pl. iii. (*Titanotherium*.)
 Roger, O. 1896 A, p. 194. (*Titanotherium*.)
 Trouessart, E. L. 1898 A, p. 741. (*Titanotherium*.)
 Oligocene (White River); South Dakota.

BRONTOTHERIUM Marsh. Type *B. gigas* Marsh.

- Marsh, O. C. 1873 H, p. 486.
 Cope, E. D. 1873 S, p. 2. (*Miobasilus*, type *M. ophryas*.)
 1873 DD. (*Miobasilus*.)
 1874 A, p. 108. (*Miobasilus*.)
 1887 L, p. 926. ("Brontops.")
 1887 N, p. 1063. (Syn. of *Menodus*.)
 1891 A, p. 9. (*Menodus*, in part.)
- Flower, W. H. 1876 B, xiii, p. 327.
- Flower and Lydekker 1891 A, p. 413. (Syn. of *Titanotherium*.)
- Leidy, J. 1874 B. (Syn. of *Titanotherium*.)
- Marsh, O. C. 1874 A, p. 81.
 1874 D, p. 66.
 1875 B, p. 245.
 1876 C, p. 334. (*Brontotherium*.)
 1887 B, p. 326 (*Brontops*, type *B. robustus*); p. 330 (*Titanops*, type *T. curtus*).
 1889 A, p. 163 (*Brontops*); p. 165 (*Titanops*).
 1889 H. (*Brontops*.)
- Nature 1874 A.
- Osborn, H. F. 1896 B, p. 175. (*Titanotherium*, in part.)
- Schlosser, M. 1886 A, p. 253.
- Scott and Osborn 1887 A, p. 262. (*Menodus*, in part.)
 1887 B, p. 157. (Syn. of *Menodus*.)
- Trouessart, E. L. 1898 A, p. 740. (Syn. of *Titanotherium*.)
- Woodward, A. S. 1898 B, p. 330 (*Titanotherium*, in part); p. 332 (*Brontotherium*).

Brontotherium bucco (Cope.)

- Cope, E. D. 1873 CC, p. 11. (*Symborodon*.)
 1873 DD. (*Symborodon*.)
 1874 B, p. 485, in part. (*Symborodon*.)
 1874 G, p. 89. (*Symborodon*.)

Megacerops? crassicornis (Marsh.)

- Marsh, O. C. 1891 E, p. 268. (Allops.)
 Oligocene (White River); South Dakota.

Megacerops dispar (Marsh.)

- Marsh, O. C. 1887 B, p. 328, figs. 7, 8; not figs. 5, 6. (*Brontops*.)
 1891 E, p. 269. (*Brontops validus*.)
 Osborn, H. F. 1896 B, p. 188. (*Titanotherium*.)
 Roger, O. 1896 A, p. 195. (*Titanotherium*.)
 Scott and Osborn 1887 B, p. 158, text figs. 3¹, 5¹, 6¹. (*Menodus coloradensis*.)
 Trouessart, E. L. 1898 A, p. 742. (*Titanotherium*.)
 Zittel K. A. 1893 B, p. 307, figs. 249, 250. (*Titanotherium*.)
 Oligocene (White River); South Dakota.

Megacerops? serotinus (Marsh.)

- Marsh, O. C. 1887 B, p. 331. (Allops.)
 Cope, E. D. 1887 L, p. 926. (*Menodus*.)
 Osborn, H. F. 1896 B, p. 192. (*Titanotherium*.)
 Roger, O. 1896 A, p. 195. (*Titanotherium*.)
 Oligocene (White River); South Dakota.

Cope, E. D. 1887 N, p. 1063. (*Symborodon*.)

- Roger, O. 1896 A, p. 195. (*Titanotherium*.)
 Trouessart, E. L. 1898 A, p. 742. (*Titanotherium*.)
 Oligocene (White River); Colorado.

Brontotherium curtum (Marsh.)

- Marsh, O. C. 1887 B, p. 330, fig. 11. (*Titanops*.)
 Cope, E. D. 1887 L, p. 926. (Syn. of *Menodus platyceras*.)
 1891 D, p. 48. (*Menodus peltoceras*.)
 Marsh, O. C. 1897 C, p. 522, fig. 94. (*Titanops*.)
 Matthew, W. D. 1899 A, p. 58. (*Titanotherium curtum*, *T. peltoceras*.)
 Osborn, H. F. 1896 B, p. 189, pl. iv. (*Titanotherium*.)
 Roger, O. 1896 A, p. 194 (*Titanotherium curtum*, a syn. of *T. platyceras*); p. 195 (*T. peltoceras*).
 Trouessart, E. L. 1898 A, p. 741 (*Titanotherium peltoceras*); p. 743 (*T. curtum*, a syn. of *T. platyceras*).
 Oligocene (White River); Colorado, South Dakota.

Brontotherium dolichoceras (Scott and Osb.).

- Scott and Osborn 1887 B, p. 160, text figs. 3³, 5³, 6³. (*Menodus*.)
 Cope, E. D. 1887 N, p. 1063. (*Menodus*.)
 Matthew, W. D. 1899 A, p. 58. (*Titanotherium*.)
 Osborn, H. F. 1896 B, p. 185, pl. iv; text fig. p. 169. (*Titanotherium*.)
 Osborn and Wortman 1895 A, p. 349. (*Titanotherium*.)
 Roger, O. 1896 A, p. 194. (*Titanotherium*.)
 Trouessart, E. L. 1898 A, p. 742. (*Titanotherium*.)
 Oligocene (White River); South Dakota.

Brontotherium gigas Marsh.*Marsh, O. C.* 1873 H, p. 486.

King, C. 1878 A, p. 412.

Marsh, O. C. 1876 C, pl. xii.

1887 B, p. 330, fig. 12. (Titanops elatus.)

1897 C, p. 527.

Matthew, W. D. 1899 A, p. 58. (Titanotherium elatum.)

Osborn, H. F. 1896 B, p. 175 (Titanotherium gigas), p. 171, text figure (T. elatum); p. 189, pl. iv (T. elatum).

1896 C, pp. 709, 714, illust. 5. (Titanotherium elatum.)

1898 Q, p. 17. (Titanotherium elatum.)

Osborn and Wortman 1895 A, p. 349. (Titanotherium elatum.)

Roger, O. 1896 A, p. 194. (Titanotherium gigas.)

Trouessart, E. L. 1898 A, p. 742. (Titanotherium gigas; T. elatum, a subsp. of T. montanum.)

Oligocene (White River); Colorado, South Dakota.

Brontotherium hypoceras (Cope).*Cope, E. D.* 1874 B, p. 491. (Symborodon.)

Osborn, H. F. 1896 B, p. 183. (Titanotherium.)

Trouessart, E. L. 1898 A, p. 742. (Syn.? of T. ingens.)

Oligocene (White River); Colorado.

Brontotherium medium (Marsh).*Marsh, O. C.* 1891 E, p. 269. (Titanops.)

Oligocene (White River); South Dakota.

Brontotherium? ophryas (Cope).*Cope, E. D.* 1873 S, p. 3. (Miobasileus.)

1873 CC, p. 14. (Miobasileus.)

1874 A, p. 108. (Miobasileus.)

1874 B, p. 490. (Symborodon.)

Osborn, H. F. 1896 B, p. 177. (Titanotherium.)

Trouessart, E. L. 1898 A, p. 743. (Titanotherium.)

Oligocene (White River); Colorado.

Brontotherium platyceras (Scott and Osb.).*Scott and Osborn* 1887 B, p. 160, text fig. 4. (Menodus.)

Cope, E. D. 1887 L, p. 926. (Menodus.)

1887 N, p. 1063. (Menodus.)

1891 A, p. 9. (Menodus.)

Matthew, W. D. 1899 A, p. 58. (Titanotherium.)

Osborn, H. F. 1896 B, pp. 167, 185, pl. iv, text figs. 7, 7a, and p. 167. (Titanotherium.)

Roger, O. 1896 A, p. 194. (Titanotherium.)

Trouessart, E. L. 1898 A, p. 743. (Titanotherium.)

Zittel, K. A. 1893 B, p. 309, fig. 251. (Titanotherium.)

Oligocene (White River); South Dakota.

TITANOTHERIUM Leidy. Type *Palaeotherium? proutii* Owen, Norw., Evans.*Leidy, J.* 1852 J, p. 552.

Cary, A. 1892 A, p. 309, pl. xviii, fig. 2.

Cope, E. D. 1873 E, pp. 564, 585.

1874 G, p. 90.

1874 K, p. 224.

1881 G, p. 397. (Menodus.)

Brontotherium ramosum (Osborn).*Osborn, H. F.* 1896 B, pp. 167, 194, pl. iv, figures; text fig. 13. (Titanotherium.)

Matthew, W. D. 1899 A, p. 58. (Titanotherium.)

Trouessart, E. L. 1898 A, p. 743. (Titanotherium.)

Oligocene (White River); South Dakota.

Brontotherium robustum (Marsh).*Marsh, O. C.* 1887 B, p. 326. (Brontops.)

Hatcher, J. B. 1893 B, p. 212. (Titanotherium.)

Hutchinson, H. N. 1893 A, p. 160, pl. xv. (Titanotherium.)

Marsh, O. C. 1889 A, p. 163, pl. vi. (Brontops.)

1889 H, p. 706. (Brontops.)

1897 C, pl. xxix. (Brontops.)

Matthew, W. D. 1899 A, p. 58. (Titanotherium.)

Osborn, H. F. 1896 A, p. 162. (Titanotherium.)

1896 B, p. 187, text fig. 8. (Titanotherium.)

Osborn and Wortman 1895 A, p. 346, pls. viii, ix; text figs. 1-3. (Titanotherium.)

Trouessart, E. L. 1898 A, p. 742. (Titanotherium.)

Woodward, A. S. 1898 B, p. 331, fig. 190. (Titanotherium.)

Zittel, K. A. 1893 B, p. 306, fig. 247. (Titanotherium.)

Oligocene (White River); Nebraska, Colorado.

Brontotherium? selwynianum (Cope).*Cope, E. D.* 1889 D, p. 628. (Menodus.)

Ami, H. M. 1891 A. (Menodus.)

Cope, E. D. 1891 A, p. 17, pl. v, figs. 3-3b. (Menodus.)

Matthew, W. D. 1899 A, p. 58. (Titanotherium.)

Osborn, H. F. 1896 B, p. 193. (Titanotherium selwynianus.)

Roger, O. 1896 A, p. 194. (Titanotherium.)

Trouessart, E. L. 1898 A, p. 741. (Titanotherium.)

Oligocene (White River); Swift Current Creek, Canada.

Brontotherium tichoceras (Scott and Osb.).*Scott and Osborn* 1887 A, p. 159, text figs. 3², 5², 6². (Menodus.)

Cope, E. D. 1887 N, p. 1063. (Menodus.)

1891 A, p. 9. (Menodus tichoceras, M. altirostris.)

Matthew, W. D. 1899 A, p. 58. (Titanotherium.)

Osborn, H. F. 1896 B, p. 184, pl. iii, figures; and p. 169. (Titanotherium.)

Roger, O. 1896 A, p. 195. (Titanotherium.)

Trouessart, E. L. 1898 A, p. 742. (Titanotherium.)

Oligocene (White River); South Dakota.

Cope, E. D. 1884 O, p. 713. (Menodus.)

1887 L, p. 926. (Menodus.)

1887 N, p. 1063. (Menodus.)

1891 A, p. 8. (Menodus.)

Flower, W. H. 1876 B, xiii, p. 327.

1876 C, p. 115.

- Flower and Lydekker 1891 A, p. 413. (Titanotherium, in part.)
 Gaudry, A. 1878 B, p. 163.
 Green, F. V. 1853 A.
 Hatcher, J. B. 1893 B.
 Hay, O. P. 1899 A, p. 594. (Menodus.)
 Leidy, J. 1850 C, p. 122. (Palæotherium.)
 1851 A. (Palæotherium.)
 1852 A. (Rhinoceros.)
 1853 D, p. 392. (Titanotherium; Eotherium, type *E. americanum*.)
 1854 A, pp. 72, 114.
 1856 H, p. 92.
 1869 A, p. 207.
 1871 C, p. 352.
 1874 B.
 1874 C.
 Lydekker, R. 1896 B, pp. 170, 377.
 Marsh, O. C. 1873 H, p. 486. (Titanotherium; Menodus preoccupied.)
 1874 A.
 1875 B, p. 245.
 1876 C, p. 338. (Menodus.)
 1884 F, p. 225. (Menodus.)
 1887 B, p. 328. (Menops, type *M. varians*.)
 1889 A, p. 165. (Menops.)
 Nature 1874 A.
 Nicholson and Lydekker 1889 A, p. 1374. (Titanotherium, in part.)
 Osborn, H. F. 1890 D, pp. 513, 542. (Titanotherium, in part.)
 1896 A.
 1896 B. (Titanotherium, in part.)
 ?Pomel, A. 1849, Biblioth. Univ. Genève, x, p. 75. (Menodus.)
 Prout, H. A. 1860 A. (Leidyotherium.)
 Rüttimeyer, L. 1862 A, p. 571.
 Schlosser, M. 1886 A, p. 253. (Titanotherium, Menodus.)
 1886 B, p. 19.
 Scott, W. B. 1891 A, p. 371. (Titanotherium, in part.)
 1892 A, p. 432. (Titanotherium, in part.)
 Scott and Osborn 1887 A, p. 262. (Menodus.)
 1887 B, p. 158. (Menodus.)
 Steinmann and Döderlein 1890 A, p. 778. (Menodus.)

Titanotherium heloceras (Cope).

- Cope, E. D. 1873 S, p. 4. (Megaceratops heloceras, *err. typ.*)
 1873 CC, p. 14. (Symborodon.)
 1873 DD. (Symborodon heloceros.)
 1874 A, p. 109. (Symborodon.)
 1874 B, pp. 484, 487. (Symborodon.)
 1887 N, p. 1063. (Symborodon.)
 Hatcher, J. B. 1893 B, p. 219, fig. 3.
 Matthew, W. D. 1899 A, p. 58.
 Osborn, H. F. 1896 B, p. 179, pl. iii; text fig. p. 171.
 Trouessart, E. L. 1898 A, p. 741.
 Oligocene (White River); Colorado.

Titanotherium ingens (Marsh).

- Marsh, O. C. 1874 A, p. 85, pls. i, iv. (Brontotherium.)

- Cope, E. D. 1874 Q. (Syn. of Symborodon trigonoceras.)
 1887 N, p. 1063. (Menodus.)
 1891 A, p. 91. (Syn. of Menodus americanus.)
 Gaudry, A. 1878 B, p. 75, fig. 87. (Brontotherium.)
 Hatcher, J. B. 1893 B, p. 219, fig. 2.
 King, C. 1878 A, p. 411. (Brontotherium.)
 Marsh, O. C. 1876 C, pls. x-xiii, and text figs. 1, 2. (Brontotherium.)
 1884 F, figs. 64, 160, 161. (Brontotherium.)
 1885 B, figs. 101, 130, 131. (Brontotherium.)
 1897 C, p. 522, fig. 93. (Brontotherium.)
 Matthew, W. D. 1899 A, p. 58.
 Nature 1874 A, figs. 1, 2. (Brontotherium.)
 Osborn, H. F. 1896 B, p. 182, text fig. p. 171.
 Scott and Osborn 1887 B, p. 158. (Syn. of Menodus coloradensis.)
 Trouessart, E. L. 1898 A, p. 742.
 Zittel, K. A. 1893 B, p. 304, fig. 245.
 Oligocene (White River); Colorado, South Dakota.

Titanotherium proutii (Owen, Norw., and Evans).

- Owen, Norwood, and Evans 1850 A, p. 66. (Palæotherium?.)
 Ami, H. M. 1891 A. (Menodus americanus, M. proutii.)
 Cope, E. D. 1874 K.
 ?1887 N, p. 1063, pl. xxxii. (Menodus giganteus.)
 Hayden, F. V. 1858 B, p. 157.
 Leidy, J. 1850 C, p. 122. (Palæotherium.)
 1851 A. (Palæotherium.)
 1852 A, p. 2. (Rhinoceros americanus.)
 1852 J, p. 551, pl. ix, figs. 3, 3a?; pl. xii b, figs. 3, 4, 6 (Palæotherium proutii); explan. pl. xii b (P. maximum).
 1852 L, p. 64. (Palæotherium.)
 1853 D, p. 392. (T. proutii; Eotherium americanum.)
 1854 A, pp. 72, 114, pl. xvi; pl. xvii, figs. 1-10 (T. proutii); pp. 78, 114, pl. xvii, figs. 11-13 (Palæotherium giganteum).
 1854 E, p. 157.
 1856 H, p. 92.
 1869 A, pp. 206, 389, pl. xxiv. (T. proutii.)
 1871 C, p. 354.
 1874 B.
 1874 C.
 Marsh, O. C. 1870 D.
 1873 H, p. 486.
 1874 A, p. 81.
 1874 H, p. 486. (T. proutii.)
 1876 C, p. 138.
 Osborn, H. F. 1896 B, p. 158. (T. proutii, T. maximum, T. americanum.)
 Osborn and Wortman 1895 A, p. 34, fig. 2.
 Pictet, F. J. 1853 A, p. 311. (Palæotherium.)
 Prout, H. A. 1846 A, fig. 1. ("Palæotherium.")
 1847 A, figs. 1, 2. (Palæotherium?)
 Roger, O. 1896 A, p. 194. (T. proutii, T. americanum.)
 Scott and Osborn 1887 B, p. 163.
 Trouessart, E. L. 1898 A, p. 741. (T. proutii, T. americanum.)

Zittel, K. A. 1893 B, p. 305, fig. 246.

Oligocene (White River); South Dakota?

References of specimens to this species by writers since the original description may or may not be correct. More than one species may be included.

Titanotherium trigonoceras (Cope).

Cope, E. D. 1873 CC, p. 13. (Symborodon.)

1874 B, p. 488. (Symborodon.)

1874 G, pp. 89, 90. (Symborodon trigonoceros.)

1874 P, p. 28. (Symborodon.)

1874 Q, p. 2. (Symborodon.)

1887 L, p. 926. (Menops varians=Menodus trigonoceras.)

SYMBORODON Cope.

Cope, E. D. 1873 S, p. 2.

1873 DD.

1874 A, p. 108.

1874 B, p. 480.

1874 G, p. 90.

1874 K, p. 224.

1881 G, p. 397.

1884 O, p. 713.

1887 L, p. 926.

1887 N, p. 1063.

1887 S.

1889 C.

1891 A, p. 9.

Flower, W. H. 1876 B, xiii, p. 327.

Flower and Lydekker 1891 A, p. 413. (Syn. of Titanotherium.)

Leidy, J. 1874 B. (Syn. of Titanotherium.)

Marsh, O. C. 1874 A, p. 81. (Syn. of Brontotherium.)

1875 B, p. 246. (Anisacodon, type *A. montanus*.)

1876 C, p. 338 (Megacerops, part; Brontotherium, part); p. 339 (Diconodon, to replace Anisacodon Marsh, 1875; preoccupied by Marsh, 1872).

Nicholson and Lydekker 1898 A, p. 1374. (Syn. of Titanotherium.)

Osborn, H. F. 1890 D, p. 513. (Titanotherium, in part.)

1896 B. (Titanotherium, in part.)

Scott and Osborn 1887 B, p. 157. (Syn. of Menodus.)

Steinmann and Döderlein 1890 A, p. 778.

Trouessart, E. L. 1898 A, p. 740. (Syn. of Titanotherium.)

Symborodon acer Cope.

Cope, E. D. 1873 S. p. 4. (Megaceratops.)

1873 CC, p. 12 (S. altirostris); p. 13 (S. acer).

1873 DD. (S. acer, S. altirostris.)

1874 A, p. 109.

1874 B, p. 486, pls. v, vi; pl. viii, fig. 1 (S. altirostris); p. 488, pl. vii; pl. viii, fig. 3 (S. acer).

1874 G, p. 89. (S. acer, S. altirostris.)

1887 N, p. 1064, fig. 28; pl. xxxiv, fig. 3 (S. acer); pl. xxxiii, fig. a; pl. xxxiv, fig. 1 (S. altirostris).

Cope, E. D. 1887 N, p. 1065, figs. 29, 30, 31? (Symborodon.)

1889 C, p. 259, fig. 81. (Symborodon.)

1891 A, p. 9. (Symborodon.)

Marsh, O. C. 1887 B, p. 328, fig. 9; not fig. 10. (Menops varians.)

Matthew, W. D. 1899 A, p. 58.

Osborn, H. F. 1896 B, p. 180, pl. iii, text figs. 501 and 6355 on p. 167; not text figs. 5, 6 (T. trigonoceras); p. 189, pl. iii (T. varians).

Scott and Osborn 1887 B, p. 158. (Syn. of Menodus coloradensis.)

Trouessart, E. L. 1898 A, p. 741. (T. trigonoceras.) Oligocene (White River); Colorado, South Dakota.

Type *S. torvus* Cope.

Cope, E. D. 1891 A, p. 9. (S. acer, S. altirostris.)

Hatcher, J. B. 1893 B, p. 219, fig. 1. (Titanotherium.)

Matthew, W. D. 1899 A, p. 58. (Titanotherium.)

Osborn, H. F. 1896 B, pp. 178, 179, pl. iv, and text figs. 3 A, 4. (Titanotherium.)

Roger, O. 1896 A, p. 195. (Titanotherium acer, T. altirostris.)

Trouessart, E. L. 1898 A, p. 743.

Oligocene (White River); Colorado, Nebraska, South Dakota, Canada.

Symborodon montanus (Marsh).

Marsh, O. C. 1875 B, p. 246. (Anisacodon.)

King, C. 1878 A, p. 412. (Diconodon.)

Marsh, O. C. 1876 C, p. 339. (Diconodon.)

Matthew, W. D. 1899 A, p. 58. (Titanotherium.)

Osborn, H. F. 1896 B, p. 183. (Titanotherium.)

Roger, O. 1896 A, p. 195. (Titanotherium.)

Trouessart, E. L. 1898 A, p. 742. (Titanotherium.) Oligocene (White River); South Dakota.

Symborodon torvus Cope.

Cope, E. D. 1873 S, p. 2. (S. torrus, *errore typog.*)

1873 CC, p. 14.

1874 A, p. 108.

1874 B, p. 485, pl. ii, fig. 1; pls. iii, iv; pl. viii, fig. 2. (S. bucco.)

1874 G.

1887 N, p. 1063, pl. xxxiii, fig. b; pl. xxxiv, fig. 2. (S. bucco.)

1891 A, pp. 9, 11. (S. bucco, S. proutii.)

Matthew, W. D. 1899 A, p. 58. (Titanotherium.)

Osborn, H. F. 1896 B, p. 176, pl. iii; not text figs. 2, 3 (Titanotherium torvum); pp. 167, figure; p. 179, pl. iii (T. bucco).

1898 Q, p. 9. (Menodus.)

Roger, O. 1896 A, p. 195. (Titanotherium.)

Trouessart, E. L. 1898 A, p. 742. (Syn. of Titanotherium bucco.)

Woodward, A. S. 1898 B, p. 331, fig. 190. (Menodus.)

Oligocene (White River); Colorado, South Dakota, Nebraska.

TELEODUS Marsh. Type *T. avus* Marsh.

- Marsh, O. C. 1890 D, p. 524.
 Hatcher, J. B. 1893 B, p. 217.
 Osborn, H. F. 1896 B, p. 175 (Syn.? of Diplacodon);
 p. 194 (Syn.? of Titanotherium).
 Zittel, K. A. 1893 B, pp. 304, 308. (Syn. of Titanotherium.)

Teleodus avus Marsh.

Marsh, O. C. 1890 D, p. 524.

- Matthew, W. D. 1899 A, p. 57. (Titanotherium.)
 Osborn, H. F. 1896 B, p. 194. (Titanotherium avum.)
 Roger, O. 1896 A, p. 194. (Titanotherium.)
 Trouessart, E. L. 1898 A, p. 740. (Diplacodon.)
 Oligocene (White River); South Dakota.

Superfamily RHINOCEROTOIDEA.

Gill, T. 1872 B, pp. 12, 85, 87.

| Osborn, H. F. 1898 I, pp. 79, 80.

HYRACODONTIDÆ.

- Branco, W. 1897 A, p. 20.
 Cope, E. D. 1879 C, p. 228.
 1879 V, p. 771 a.
 1881 G, pp. 378, 393.
 1881 O.
 1884 O, pp. 615, 691.
 1887 K.
 1887 N.
 Osborn, H. F. 1893 D, p. 37.
 1898 I, pp. 79, 80, 94.

- Osborn, H. F. 1900 C, p. 570.
 Osborn and Wortman 1895 A, p. 367.
 Roger, O. 1896 A, p. 185.
 Scott and Osborn 1883 A, p. 17. ("Hyracodon series.")
 Steinmann and Döderlein 1890 A, p. 772. (Hyracodontinæ.)
 Trouessart, E. L. 1898 A, p. 744. (Hyracodontinæ.)
 Zittel, K. A. 1893 B, p. 284. (Subfamily.)

HYRACHYINÆ.

Osborn, H. F. 1893 D, p. 40.
 1898 I, p. 85.

| Osborn and Wortman 1892 A, p. 93.

HYRACHYUS Leidy. Type *H. agrarius* Leidy.

- Leidy, J. 1871 K, p. 229.
 Brandt, J. F. 1878 A, p. 24.
 Cope, E. D. 1873 E, p. 594.
 1873 H.
 1881 G, p. 381.
 1883 II, p. 969.
 1884 O, pp. 618, 657.
 1887 N, p. 994.
 1889 C.
 Earle, C. 1892 C, p. 329.
 Filhol, H. 1885 A.
 1888 A, p. 180.
 Flower, W. H. 1876 B, xiii, p. 327.
 Flower and Lydekker 1891 A, p. 373.
 Gaudry, A. 1877 A.
 1878 B, p. 65.
 1897 A, p. 320.
 Leidy, J. 1871 C, p. 357.
 1872 B, p. 360.
 1872 C, p. 19.
 1873 B, pp. 59, 327.
 Marsh, O. C. 1875 B, p. 244.
 1877 E.
 Nicholson and Lydekker 1889 A, p. 1355.
 Osborn, H. F. 1890 D, p. 505.
 1898 I, p. 87, fig. 5.
 Osborn, Scott, and Speir 1878 A, p. 49.
 Osborn and Wortman 1892 A, p. 129.
 Pavlow, M. 1888 A, p. 177.
 1892 A.
 Rüttimeyer, L. 1891 A, p. 28.

- Schlosser, M. 1886 B, p. 23.
 Scott, W. B. 1883 A, p. 49.
 1896 B.
 Scott and Osborn 1883 A, p. 11.
 1887 A, p. 261.
 Steinmann and Döderlein 1890 A, p. 771.
 Trouessart, E. L. 1898 A, p. 744.
 Wortman and Earle 1893 A.
 Zittel, K. A. 1893 B, p. 284.

Hyrachyus affinis (Marsh).

- Marsh, O. C. 1871 D, p. 37. (Lophiodon.)
 Leidy, J. 1872 B, p. 362. Lophiodon.)
 1872 C, p. 20. (Lophiodon.)
 Eocene (Bridger); Wyoming.
 This species is referred to the genus *Hyrachyus* with doubt.

Hyrachyus agrarius Leidy.

- Leidy, J. 1871 K, p. 229.
 Cope, E. D. 1873 E, p. 605.
 1873 U, p. 6. (H. impicatus, specimen 1.)
 1884 O, pp. 660, 675.
 1887 N, p. 997, pl. xxxi, text fig. 10. (H. agrestis.)
 1889 C, p. 257, fig. 80. (H. agrestis.)
 King, C. 1878 A, p. 404. (H. agrarius, H. bairdianus.)
 Leidy, J. 1871 B, p. 373.
 1871 C, p. 357. (H. agrarius, H. agrestis.)
 1871 K, p. 229.

- Leidy, J. 1872 B, p. 361.
 1872 C, p. 19.
 1873 B, pp. 60, 327, pl. ii, figs. 11, 12; pl. iv, figs. 9-18; pl. xx, figs. 25, 26.
 Marsh, O. C. 1871 D, p. 36. (*Lophiodon bairdianus*.)
 1884 F, p. 64, fig. 71. (*H. bairdianus*.)
 Matthew, W. D. 1899 A, p. 46.
 Osborn, H. F. 1890 D, p. 505.
 1892 B, p. 764.
 1898 I, p. 81, fig. 1; p. 88, fig. 6; p. 89, fig. 8; p. 128, fig. 33.
 1898 Q, p. 9.
 Osborn, Scott, and Speir 1878 A, p. 49.
 Osborn and Wortman 1895 A, p. 367, figs. 9-11.
 Pavlow, M. 1892 A.
 Roger, O. 1896 A, p. 185.
 Trouessart, E. L. 1898 A, p. 744.
 Eocene (Bridger); Wyoming, Utah.

Hyrachyus eximius Leidy.

- Leidy, J.* 1871 K, p. 229.
Cope, E. D. 1873 E, p. 595.
 1873 H, p. 213.
 1884 O, pp. 660, 662, pl. xxiiiA, fig. 1; pl. liii, fig. 3; pls. liv. lv, lva; pl. lviiiA, figs. 5, 6.
Leidy, J. 1871 B, p. 373.
 1872 B, p. 361.
 1873 B, pp. 66, 327, pl. iv, figs. 19, 20; pl. xix, fig. 5; pl. xxvi, figs. 9, 10.
Matthew, W. D. 1899 A, p. 46.
Osborn, H. F. 1892 I, p. 764.
Osborn, Scott, and Speir 1878 A, pp. 49, 52.
Pavlow, M. 1892 A, p. 171.
Roger, O. 1896 A, p. 185.
Trouessart, E. L. 1898 A, p. 744.
Zittel, K. A. 1893 B, p. 284, figs. 224, 225.
 Eocene (Bridger); Wyoming.

Hyrachyus imperialis Osb., Scott, and Speir.

- Osborn, Scott, and Speir* 1878 A, p. 50.
Cope, E. D. 1884 O, p. 660.
Matthew, W. D. 1899 A, p. 46.

- Trouessart, E. L.* 1898 A, p. 744.
 Eocene (Bridger); Wyoming.

Hyrachyus implicatus Cope.

- Cope, E. D.* 1873 U, p. 5, specimen 2.
 1873 E, p. 604.
 1884 O, pp. 660, 675, 676, pl. lviii, figs. 6, 7 (*H. implicatus*); p. 660 (*H. intermedius*).
Matthew, W. D. 1899 A, p. 46.
Osborn, Scott, and Speir 1878 A, p. 51 (*H. implicatus*); p. 52 (*H. intermedius*, not of Filhol); p. 52 (*H. crassidens*).
Roger, O. 1896 A, p. 185.
Trouessart, E. L. 1898 A, p. 744. (*H. implicatus*, *H. intermedius*.)
 Eocene (Bridger); Wyoming.

Hyrachyus modestus Leidy.

- Leidy, J.* 1870 O, p. 109. (*Lophiodon*.)
Cope, E. D. 1884 O, p. 660.
Leidy, J. 1871 C, p. 357. (*Lophiodon*.)
 1872 B, p. 361.
 1872 C, p. 20.
 1873 B, pp. 67, 367, pl. ii, figs. 11, 13.
Matthew, W. D. 1899 A, p. 46.
Roger, O. 1896 A, p. 185.
Trouessart, E. L. 1898 A, p. 744.
 Eocene (Bridger); Wyoming.

Hyrachyus paradoxus Osb., Scott, and Speir.

- Osborn, Scott, and Speir* 1878 A, pp. 53, 135.
Matthew, W. D. 1899 A, p. 46.
 Eocene (Bridger); Wyoming.

Hyrachyus princeps Marsh.

- Marsh, O. C.* 1872 G, p. 125.
Cope, E. D. 1873 E, p. 595.
 1873 U, p. 6.
 1884 O, pp. 660, 661, pl. lii, fig. 4
Matthew, W. D. 1899 A, p. 46.
Roger, O. 1896 A, p. 185.
Trouessart, E. L. 1898 A, p. 744.
 Eocene (Bridger); Wyoming.

COLONOCERAS Marsh. Type *C. agrestis* Marsh.

- Marsh, O. C.* 1873 H, p. 407.
Brandt, J. F. 1878 A, p. 25.
Cope, E. D. 1879 C, p. 233.
 1881 G, p. 381.
 1884 O, p. 618.
 1887 N, p. 994.
Marsh, O. C. 1877 E.
 1884 F, fig. 10.
 1897 D, p. 166.
Nicholson and Lydekker 1889 A, p. 1356.
Osborn, H. F. 1890 D, p. 505.
 1893 D.

- Scott, W. B.* 1883 A, p. 53.
Scott and Osborn 1883 A, p. 20.
Zittel, K. A. 1893 B, p. 285.

Colonoceras agrestis Marsh.

- Marsh, O. C.* 1873 H, p. 407.
 1897 D, p. 167, fig. 2.
Matthew, W. D. 1899 A, p. 46.
Roger, O. 1896 A, p. 185.
Trouessart, E. L. 1898 A, p. 745.
 Eocene (Bridger); Wyoming.

TRIPLOPODINÆ.

- Cope, E. D.* 1881 G, pp. 378, 382. (*Triplopodidæ*.)
 1881 O. (*Triplopodidæ*.)
 1884 O, p. 615. (*Triplopodidæ*.)
 1887 N, pp. 992, 993. (*Triplopodidæ*.)
Nicholson and Lydekker 1889 A, p. 1356. (*Triplopodidæ*.)
Osborn, H. F. 1898 I, p. 85.
Osborn and Wortman 1892 A, p. 93.

TRIPLOPUS Cope. Type *T. cubitalis* Cope.*Cope, E. D.* 1880 I.

1880 M.

1881 G, p. 382.

1884 O, p. 678.

1890 C, p. 472.

Nicholson and Lydekker 1889 A, pp. 1355, 1356.
(Prothyraconodon.)

Osborn, H. F. 1890 D, p. 524.

Schlosser, M. 1886 B, p. 23.

Scott, W. B. 1883 A, p. 53.

Scott and Osborn 1883 A, p. 12.

1887 A, p. 260. (Prothyraconodon, type *P. intermedium*=*T. obliquidens*.)

Zittel, K. A. 1893 B, p. 285.

Triplopus amarorum Cope.*Cope, E. D.* 1881 G, p. 389.

1884 O, pp. 660, 687, pl. IV, figs. 6-9; pl. LVIII, fig. 2.

Matthew, W. D. 1899 A, p. 46.

Osborn, H. F. 1897 A, p. 57.

Roger, O. 1896 A, p. 185.

Trouessart, E. L. 1898 A, p. 745.

Eocene (Bridger); Wyoming.

Triplopus cubitalis Cope.*Cope, E. D.* 1880 I.

1881 G, p. 383.

1884 O, p. 687, pls. Iva, figs. 10-12; pl. Ivia.

1887 N, p. 999, fig. 13.

Matthew, W. D. 1899 A, p. 46.

Osborn, H. F. 1890 D, p. 528.

Roger, O. 1896 A, p. 185.

Scott, W. B. 1896 B, p. 367.

Trouessart, E. L. 1898 A, p. 745.

Eocene (Bridger); Wyoming.

Triplopus obliquidens (Scott and Osb.).*Scott and Osborn* 1887 A, p. 259. (Hyrachyus.)

Matthew, W. D. 1899 A, p. 49.

Osborn, H. F. 1890 D, p. 525, pl. xi, figs. 6-10.

Roger, O. 1896 A, p. 185.

Scott and Osborn 1887 A, p. 260. (Prothyraconodon *intermedium*.)

Trouessart, E. L. 1898 A, p. 745.

Eocene (Bridger); Wyoming; (Uinta); Utah.

ANCHISODON Cope. Type *A. quadriplicatus* Cope.*Cope, E. D.* 1879 L, p. 270.

1879 C, p. 233.

Scott, W. B. 1883 A, p. 50.

Anchisodon quadriplicatus Cope.*Cope, E. D.* 1873 S, p. 1. (Hyracodon.)

Brandt, J. F. 1878 A, p. 32. (Aceratherium.)

Cope, E. D. 1873 CC, p. 14. (Hyracodon.)

1874 B, p. 495. (Aceratherium.)

1879 C, p. 234.

1879 L.

Matthew, W. D. 1899 A, p. 57. (Aceratherium.)

Roger, B. 1896 A, p. 185.

Trouessart, E. L. 1898 A, p. 745 (Anchisodon); p. 749 (Aceratherium).

Oligocene (White River); Colorado.

Anchisodon tubifer Cope.*Cope, E. D.* 1879 L, p. 270.

1879 C, p. 234.

Matthew, W. D. 1899 A, p. 63. (Aceratherium.)

Roger, O. 1896 A, p. 185.

Trouessart, E. L. 1898 A, p. 745.

Miocene (John Day); Oregon.

HYRACODONTINÆ.

Branco, W. 1897 A, p. 20. (Hyracodontidæ.)

Osborn, H. F. 1898 I, p. 85.

Osborn and Wortman 1892 A, p. 93.

Steinmann and Döderlein 1890 A, p. 772.

Trouessart, E. L. 1898 A, p. 744.

HYRACODON Leidy. Type *H. nebraskensis* Leidy.*Leidy, J.* 1856 H, p. 91.

Brandt, J. F. 1878 A, p. 22.

Cope, E. D. 1879 C, p. 234.

1879 V, pp. 771a, 771d.

1884 O, p. 691.

1887 L, p. 925.

Dawkins, W. B. 1870 A.

Flower, W. H. 1876 C, p. 107.

Flower and Lydekker 1891 A, p. 412.

Gaudry, A. 1877 A.

Leidy, J. 1869 A, p. 232.

1871 C, p. 356.

Lydekker, R. 1886 A, p. 158.

Marsh, O. C. 1875 B, p. 244.

1877 E.

Nicholson and Lydekker 1889 A, p. 1356.

Osborn, H. F., in Scott and Osborn 1890 B, p. 89.

1890 D, p. 511.

Pavlov, M. 1892 A.

Scott, W. B. 1896 B.

1897 B.

Scott and Osborn, 1883 A, pp. 10, 17.

Woodward, A. S. 1895 B, p. 334.

Wortman, J. L. 1893 A.

Zittel, K. A. 1893 B, p. 285.

Hyracodon arcidens Cope.*Cope, E. D.* 1873 S, p. 2.

Brandt, J. F. 1878 A, p. 24.

Cope, E. D. 1873 CC, p. 14.

1874 B, p. 493.

1879 C, p. 234.

Matthew, W. D. 1899 A, p. 57.

Roger, O. 1896 A, p. 186.

Scott and Osborn 1887 B, p. 171.

Trouessart, E. L. 1898 A, p. 746.

Oligocene (White River); Colorado.

Hyracodon major Scott and Osb.*Scott and Osborn* 1887 B, p. 170.

Matthew, W. D. 1899 A, p. 57.

Roger, O. 1896 A, p. 186.

Trouessart, E. L. 1898 A, p. 746.

Oligocene (White River). Locality unknown.

Hyracodon nebraskensis Leidy.*Leidy, J.* 1850 C, p. 121. (Rhinoceros.)

Brandt, J. F. 1878 A, p. 23.

Cope, E. D. 1873 CC, p. 14.

1874 B, p. 493.

1879 C, p. 234.

1886 U, p. 83. [Aceratherium (Cænopus) pumilum, in part.]

1887 N, p. 1003, fig. 17.

1889 I, p. 154. (Aceratherium pumilum, in part.)

1891 A, p. 19, pl. iv, fig. 4. (Aceratherium pumilum.)

Hayden, F. V. 1858 B, p. 157. (Rhinoceros.)

King, C. 1878 A, p. 412. (Rhinoceros.)

Kowalevsky, W. 1873 A, p. 138.

Leidy, J. 1851 I, p. 331. (Aceratherium.)

1852, J, p. 556, pls. xii A, fig. 6; pl. xxii B, fig. 5. (Rhinoceros.)

1852 L, p. 63. (Rhinoceros.)

Leidy, J. 1854 A, pp. 86, 114, pls. xiv, xv. (Rhinoceros.)

1854 E, p. 157. (Aceratherium.)

1856 H, p. 92.

1865 B, p. 176.

1869 A, p. 391.

1871 C, p. 357.

Lydekker, R. 1886 A, p. 159.

Matthew, W. D. 1899 A, p. 57.

Osborn, H. F. 1896 C, pp. 711, 714, illus. 7.

1898 I, pp. 82, 93, figs. 2, 11.

1898 Q, p. 18.

Roger, O. 1896 A, p. 187.

Scott, W. B. 1896 B, pls. i-iii.

Scott and Osborn, 1887 B, p. 169.

Trouessart, E. L. 1898 A, p. 746.

Zittel, K. A. 1893 B, p. 286, fig. 226.

Oligocene (White River); South Dakota, Colorado, Nebraska.

The name of this species is commonly spelled *nebrascensis*. The original form is here given.**Hyracodon? planiceps** Scott and Osb.*Scott and Osborn* 1887 B, p. 170.

Matthew, W. D. 1899 A, p. 57.

Trouessart, E. L. 1898 A, p. 746.

Oligocene (White River); South Dakota?

AMYNODONTIDÆ.

Scott and Osborn 1883 A, pp. 4, 12.

Branco, W. 1897 A, p. 21. (Amynodontinæ.)

Cope, E. D. 1883 II, p. 969.

Nicholson and Lydekker 1889 A, p. 1365. (Amynodontinæ.)

Osborn, H. F. 1890 D, p. 50. (Amynodontidæ, Amynodontinæ.)

1895 A, p. 95.

Osborn, H. F. 1898 A, pp. 79, 80.

Osborn and Wortman 1892 A, p. 93. (Amynodontidæ, Amynodontinæ.)

1894 A, p. 208.

Pavlov, M. 1893 A, p. 41.

Scott and Osborn 1887 B, p. 164.

Zittel, K. A. 1893 B, p. 286.

AMYNODON Marsh. Type *Diceratherium advenum* Marsh.*Marsh, O. C.* 1877 D, p. 251.

Brandt, J. F. 1878 A, pp. 15, 25.

Cope, E. D. 1879 V, p. 771 f.

1882 II, p. 926. (Orthocynodon.)

1883 II, p. 969. (Orthocynodon.)

1887 K.

1890 C, p. 472.

Flower and Lydekker 1891 A, p. 412.

Marsh, O. C. 1877 E.

1893 D, p. 409.

Nicholson and Lydekker 1889 A, p. 1365.

Osborn, H. F. 1890 D, pp. 506, 551 (Amynodon); p. 508 (Orthocynodon, as subgenus).

1892 B, p. 764.

1893 D.

Pavlov, M. 1892 A, p. 172. (Amynodon, Orthocynodon.)

1893 A.

Scott and Osborn 1882 A, p. 223 (Amynodon); p. 223 (Orthocynodon, type *O. antiquus*).

1883 A. (Orthocynodon, Amynodon.)

1884 A. (Orthocynodon.)

1887 A, p. 261.

1887 B, p. 164.

Zittel, K. A. 1893 B, p. 286.

Amynodon advenus Marsh.*Marsh, O. C.* 1875 B, p. 244. (Diceratherium.)

Brandt, J. F. 1878 A, p. 32. (Diceratherium.)

King, C. 1878 A, p. 407.

L. P. B. 1885 A, p. 191, fig. 25.

Marsh, O. C. 1877 D, p. 252.

1884 F, fig. 72.

1885 B, fig. 106.

1897 D, p. 167, fig. 3. (Diceratherium.)

Matthew, W. D. 1899 A, p. 50.

Osborn, H. F. 1890 D, p. 508. [A. (Orthocynodon).]

Pavlov, M. 1892 A, p. 172. (Orthocynodon.)

Roger, O. 1896 A, p. 186.

Scott, W. B. 1892 A, p. 431.

Scott and Osborn 1882 A, p. 224. (Orthocynodon.)

1887 A, p. 262.

Trouessart, E. L. 1898 A, p. 746.

Eocene (Uinta); Utah.

Amynodon antiquus (Scott and Osb.).*Scott and Osborn* 1883 A, p. 4, pl. i; text fig. 1. (Orthocynodon.)

Matthew, W. D. 1899 A, p. 46.

Osborn, H. F. 1890 D, p. 508. [A. (Orthocynodon).]

Pavlow, M. 1893 A, p. 37.
 Roger, O. 1896 A, p. 186.
 Trouessart, E. L. 1898 A, p. 746.
 Eocene (Bridger); Wyoming.

***Amynodon intermedius* Osb.**

Osborn, H. F. 1890 D, p. 508, pl. x, fig. 10.

Matthew, W. D. 1899 A, p. 50.
 Osborn, H. F. 1895 A, p. 95.
 Pavlow, M. 1893 A, p. 37, pl. iii.
 Roger, O. 1896 A, p. 186.
 Trouessart, E. L. 1898 A, p. 746.
 Zittel, K. A. 1893 B, p. 287, fig. 227.
 Eocene (Uinta); Utah.

METAMYNODON Scott and Osb. Type *M. planifrons* Scott and Osb.

Scott and Osborn 1887 B, p. 165.
Cope, E. D. 1887 K.
 1887 N.
 1890 C, p. 472.
Flower and Lydekker 1891 A, p. 412.
Nicholson and Lydekker 1889 A, p. 1365.
Osborn, H. F. 1890 D, p. 507.
 1893 D, p. 40.
 1893 E.
Pavlow, M. 1893 A, p. 41.
Wortman, J. L. 1893 A.
Zittel, K. A. 1893 B, p. 287.

Metamynodon planifrons Scott and Osb.

Scott and Osborn 1887 B, p. 165, figs. 7-9.
Cope, E. D. 1887 N, p. 1001, figs. 15, 16.
 Matthew, W. D. 1899 A, p. 57.
Osborn, H. F. 1896 C, pp. 705, 710, illus. 6.
 1898 I, p. 83, fig. 3; p. 91, fig. 10; p. 93, fig. 12.
 1898 Q, p. 9.
Osborn and Wortman 1894 A, p. 209.
 1895 A, p. 373, pls. x, xi.
Roger, O. 1896 A, p. 186.
 Oligocene (White River); South Dakota.

RHINOCEROTIDÆ.

By some authors the spelling *Rhinoceri*dæ is employed.

Blainville, H. M. D. 1864 A, iii, x, pls. i-xiv.
Branco, W. 1897 A, p. 20
Brandt, J. F. 1849 B.
 1878 A.
Cope, E. D. 1879 C.
 1879 V.
 1881 G, pp. 378, 393.
 1881 O.
 1884 O, pp. 615, 691.
 1887 K. (Cænopidæ.)
 1897 N. (Rhinocerotidæ, Cænopidæ.)
Cuvier, G. 1834 A, iii, pp. 1-192, with plates.
Falconer, H. 1868 A, p. 309.
Flower, W. H. 1876 A.
 1876 B, xiii, p. 328.
 1883 D, p. 428.
Flower and Lydekker 1891 A, p. 402.
Gray, J. E. 1867 B.
 1869 A.
Huxley, T. H. 1872 A, p. 307.
Leidy, J. 1869 A, p. 219.
 1871 C, p. 356.
Lydekker, R. 1881 A.
 1886 A, p. 90.

Nicholson and Lydekker 1889 A, p. 1364.
Osborn, H. F., in Scott and Osborn 1890 B, p. 90.
 1893 D.
 1898 I, pp. 79, 80, 94, 95.
 1900 E, p. 885.
 1900 H.
Owen, R. 1846 B, p. 587.
 1866 B, p. 450.
 1868 A, p. 356.
Pavlow, M. 1887 A, p. 353.
 1888 A, p. 173.
 1892 A.
Roger, O. 1889 A.
 1896 A, p. 186.
Schlosser, M. 1886 A, p. 253.
 1886 B, p. 22.
 1888 A.
 1890 C.
Scott, W. B. 1892 A, p. 432.
Scott and Osborn 1884 A.
Slade, D. D. 1893 A.
Steinmann and Döderlein 1890 A, p. 772.
Trouessart, E. L. 1898 A, p. 743.
Weyhe, — 1875 A, p. 121.
Woodward, A. S. 1898 B, p. 332.
Zittel, K. A. 1893 B, p. 281.

DICERATHERIINÆ.

Osborn, H. F. 1898 I, p. 121.
 1900 E, p. 885.
 1900 H, p. 232.

Osborn and Wortman 1892 A, p. 93.
Scott and Osborn 1883 A, p. 20. ("Diceratherium series.")

TRIGONIAS Lucas. Type *T. osborni* Lucas.

Lucas, F. A. 1900 D, p. 221.
Osborn, H. F. 1900 H, p. 233.

***Trigonias osborni* Lucas.**

Lucas, F. A. 1900 D, p. 221, figs. 1, 2.

Osborn, H. F. 1900 D, p. 767, fig. 1.
 Oligocene (White River); South Dakota.

LEPTACERATHERIUM Osb. Type *Aceratherium trigonodum* Osb. and Wort.

Osborn, H. F. 1898 I, p. 182.

Leptaceratherium trigonodum (Osb. and Wort.).

Osborn and Wortman 1894 A, p. 201, pl. i, fig. A; text fig. 1. (Aceratherium.)

Matthew, W. D. 1899 A, p. 57.

Osborn, H. F. 1898 I, pp. 113, 115, 132, pl. xii; pl. xiii, fig. 1; pl. xix, fig. 27; text figs. 25, 26, 35, 44. Osborn and Wortman 1895 A, p. 373. (Aceratherium.)

Roger, O. 1896 A, p. 188. (Rhinoceros.)

Trouessart, E. L. 1898 A, p. 748. (Aceratherium.) Oligocene (White River); South Dakota.

CÆNOPUS Cope. Type *Aceratherium mite* Cope.

Cope, E. D. 1880 M, p. 610.

1881 G, p. 393.

1884 O, p. 691.

1887 K.

Osborn, H. F. 1900 E, p. 233.

Zittel, K. A. 1893 B, pp. 289, 291. (Syn. of *Aceratherium*.)

Cænopus copei Osb.

Osborn, H. F. 1898 I, pp. 113, 128, 131, 146, pl. xv; text figs. 25, 33, 34, 44. (Aceratherium.)

Matthew, W. D. 1899 A, p. 57. (Aceratherium.)

Osborn, H. F. 1900 H, p. 236.

Osborn and Wortman 1894 A, p. 203, pl. ii, fig. B; text fig. 2, B. (Aceratherium mite, not of Cope.) 1895 A, p. 371. (No name.)

Trouessart, E. L. 1899 A, p. 1346. (Aceratherium.) Oligocene (White River); South Dakota.

Cænopus mitis Cope.

Cope, E. D. 1874 B, p. 493. (Aceratherium.)

Brandt, J. F. 1878 A, p. 30. (Aceratherium.)

Cope, E. D. 1879 C, p. 235. (Aceratherium.)

1879 P, p. 333. (Aceratherium.)

1879 V, p. 771c. (Aceratherium.)

1880 M. (Cænopus.)

1885 H. (Aceratherium.)

1886 U, p. 83. (Aceratherium mite; A. pumilum, in part.)

1887 K. (Cænopus.)

1889 I, p. 154. (Aceratherium mite; A. pumilum, in part.)

1891 A, p. 19, pl. iv, figs. 2, 3 (Cænopus); p. 19, pl. iv, fig. 4. (C. pumilis.)

Lydekker, R. 1881 A, p. 21. (Aceratherium.)

Matthew, W. D. 1899 A, p. 57. (Aceratherium.)

Osborn, H. F. 1893 C. (Aceratherium.)

1898 I, pp. 89, 136, figs. 8, 36, 37, 39. (Aceratherium.)

Osborn and Wortman 1894 A, p. 208. (A. pumilum.) 1895 A, p. 371. (Aceratherium.)

Roger, O. 1896 A, p. 187 (Rhinoceros pumilum); p. 188 (R. mite).

Scott, W. B. 1896 B, p. 367. (Aceratherium.)

Trouessart, E. L. 1898 A, p. 748. (Aceratherium mite, A. pumilum.)

Wortman, J. L. 1893 A, p. 104. (Aceratherium.) Oligocene (White River); South Dakota, Canada.

Cænopus occidentalis (Leidy).

Leidy, J. 1851 E, p. 276. (Rhinoceros.)

Brandt, J. F. 1878 A, p. 31. (Aceratherium.)

Cope, E. D. 1873 CC, p. 14. (Aceratherium.) 1874 B, p. 495. (Aceratherium.)

Cope, E. D. 1879 C, p. 235. (Aceratherium.)

1879 P, p. 333. (Aceratherium.)

1887 K.

1887 N, p. 1000, fig. 14.

1891 A, p. 19. (Aceratherium.)

King, C. 1878 A, p. 412. (Aceratherium.)

Hayden, F. V. 1858 B, p. 157. (Rhinoceros.)

Leidy, J. 1850 B, p. 119. (Rhinoceros; no description.)

1851 I, p. 331. (Aceratherium.)

1852 J, p. 552, pl. ix, figs. 1, 2. (Rhinoceros.)

1852 L, p. 64. (Rhinoceros.)

1853 D, p. 392. (Rhinoceros.)

1854 A, pp. 81, 114, pls. xii, xiii. (Rhinoceros.)

1854 E, p. 157. (Aceratherium.)

1865 B. (Rhinoceros.)

1865 A, pp. 220, 390, pl. xxi, fig. 34; pl. xxii; pl. xxiii, figs. 1-3. (Rhinoceros, Aceratherium.)

1871 C, p. 356. (Rhinoceros.)

Lydekker, R. 1881 A, p. 21. (Aceratherium.)

1886 A, p. 143. (Rhinoceros.)

Matthew, W. D. 1899 A, p. 57. (Aceratherium.)

Osborn, H. F. 1893 C. (Aceratherium.)

1898 I, pp. 90, 109, 128, 131, 134, 150, pl. xiii, figs. 5, 6, 7; pl. xvi; pl. xix, fig. 9; text figs. 9, 21, 33, 34, 35. (Aceratherium.)

1900 H, p. 245. (Cænopus.)

Osborn and Wortman 1894 A, p. 204, pl. ii, fig. C; text fig. 3, A. (Aceratherium.)

1895 A, p. 373, fig. 12. (Aceratherium.)

Pavlow, M. 1892 A. (Aceratherium.)

Pohlig, H. 1893 A, p. 41, pl. iii. (Aceratherium.)

Roger, O. 1896 A, p. 188. (Rhinoceros.)

Scott and Osborn 1887 B, p. 169. (Aceratherium.)

Trouessart, E. L. 1898 A, p. 747. (Aceratherium.) Oligocene (White River); South Dakota, Nebraska, Colorado, Canada.

Cænopus simplicidens Cope.

Cope, E. D. 1891 D, p. 48. (Cænopus.)

Matthew, W. D. 1899 A, p. 57. (Aceratherium.)

Osborn, H. F. 1898 I, p. 145, fig. 43. (Aceratherium.)

Osborn and Wortman 1894 A, 209. (Aceratherium.)

Roger, O. 1896 A, p. 188. (Rhinoceros.)

Trouessart, E. L. 1898 A, p. 748. (Aceratherium.) Oligocene (White River); Nebraska.

Cænopus tridactylus Osb.

Osborn, H. F. 1893 C. (Aceratherium.)

Hatcher, J. B. 1894 B. (Diceratherium proavittum.)

1897 A. (Diceratherium proavittum and Aceratherium tridactylum.)

- Matthew, W. D. 1899 A, p. 57. (*Aceratherium*.)
 Osborn, H. F. 1898 E, p. 55. (*Aceratherium*.)
 1898 I, pp. 84, 94, 109, 115, 128, 131, 134, 158,
 pl. xiii, fig. 8; pl. xvii; pl. xix, fig. 30; pl.
 xx, text figs. 4, 13, 21, 26, 33, 34, 35, 48, 49.
 (*Aceratherium*.)
 1898 Q, pp. 13, 15. (*Aceratherium*.)
 1900 H, p. 245. (*Cænopus*.)
 Osborn and Wortman 1894 A, p. 206, pl. ii, fig. E;
 pl. iii (*Aceratherium tridactylum*); p. 208 (*Diceratherium proavium*).

- Osborn and Wortman 1895 A, p. 373. (*Aceratherium*.)
 Roger, O. 1896 A, p. 189. (*Rhinoceros proavium*.)
 Scott, W. B. 1896 B, p. 381. (*Aceratherium*.)
 Trouessart, E. L. 1898 A, p. 748 (*Aceratherium tridactylum*); p. 752 (*Diceratherium proavium*.)
 Oligocene (White River); South Dakota, North Dakota.

DICERATHERIUM Marsh. Type *D. armatum* Marsh.

- Marsh, O. C. 1875 B, p. 242.
 Branco, W. 1897 A, p. 21.
 Brandt, J. F. 1878 A, p. 32.
 Cope, E. D. 1879 C, p. 233.
 1879 V, pp. 771b, 771h.
 1881 G, p. 393.
 1884 O, p. 692.
 1887 N, p. 1004.
 Flower, W. H. 1876 B, xiii, p. 327.
 Flower and Lydekker 1891 A, p. 411.
 Hatcher, J. B. 1894 B.
 Lydekker, R. 1886 A, p. 91. (Syn. of *Rhinoceros*.)
 Marsh, O. C. 1876 G, p. 60.
 1877 E.
 Matthew, W. D. 1899 A, p. 22.
 Nicholson and Lydekker 1889 A, p. 1368.
 Osborn, H. F. 1898 I.
 1900 H, p. 232.
 Schlosser, M. 1886 B, p. 24.
 Scott and Osborn 1883 A, p. 21.
 Woodward, A. S. 1898 B, p. 335.
 Zittel, K. A. 1893 B, p. 292.

Diceratherium annectens Marsh.

- Marsh, O. C. 1873 H, p. 409. (*Rhinoceros*.)
 Brandt, J. F. 1878 A, p. 4. (*Rhinoceros*.)
 Marsh, O. C. in King, C. 1878 A, p. 424. (*Diceratherium*.)
 Leidy, J. 1873 B, p. 328. (*Rhinoceros*.)
 Matthew, W. D. 1899 A, p. 63. (*Aceratherium*.)
 Trouessart, E. L. 1898 A, p. 748. (*Aceratherium*.)
 Miocene (John Day); Oregon.

Diceratherium armatum Marsh.

- Marsh, O. C. 1875 B, p. 242.
 Brandt, J. F. 1878 A, p. 32.
 King, C. 1878 A, p. 424.
 Matthew, W. D. 1899 A, p. 63.
 Roger, O. 1896 A, p. 189. (*Rhinoceros*.)
 Trouessart, E. L. 1898 A, p. 752.
 Miocene (John Day); Oregon.

Diceratherium hesperium (Leidy).

- Leidy, J. 1865 B, p. 177. (*Rhinoceros*.)
 Brandt, J. F. 1878 A, p. 40. (*Rhinoceros*.)
 Cope, E. D. 1879 p. 333. (Syn. of *A. pacificum*.)
 Dana, J. D. 1879 A, p. 233. (*Rhinoceros*.)
 Leidy, J. 1869 A, pp. 230, 390, pl. xxiii, figs. 11, 12.
 (*Rhinoceros*.)
 1870 P, p. 112. (*Rhinoceros*.)
 1871 C, p. 356. (*Rhinoceros*.)

- Leidy, J. 1873 B, pp. 220, 328, pl. ii, figs. 8, 9. (*Rhinoceros hesperius*?)
 Matthew, W. D. 1899 A, p. 63.
 Roger, O. 1896 A, p. 189. (*Rhinoceros*.)
 Trouessart, E. L. 1898 A, p. 751. (*Aphelops*.)
 Whitney, J. D. 1879 A, p. 243. (*Rhinoceros*.)
 Miocene; California: (John Day); Oregon?

Diceratherium nanum Marsh.

- Marsh, O. C. 1875 B, p. 243.
 Brandt, J. F. 1878 A, p. 32.
 King, C. 1878 A, p. 424.
 Matthew, W. D. 1899 A, p. 63.
 Roger, O. 1896 A, p. 189. (*Rhinoceros*.)
 Trouessart, E. L. 1898 A, p. 752.
 Miocene (John Day); Oregon.

Diceratherium oregonense (Marsh).

- Marsh, O. C. 1873 H, p. 410. (*Rhinoceros*.)
 Brandt, J. F. 1878 A, p. 41. (*Rhinoceros*.)
 Leidy, J. 1873 B, p. 328. (*Rhinoceros*.)
 Matthew, W. D. 1899 A, p. 71. (*Aceratherium*.)
 Roger, O. 1896 A, p. 189. (*Rhinoceros*.)
 Trouessart, E. L. 1898 A, p. 751. (*Aphelops*.)
 Miocene (Loup Fork); Oregon.

Diceratherium pacificum (Leidy).

- Leidy, J. 1871 M, p. 248. (*Rhinoceros*.)
 Brandt, J. F. 1878 A, p. 41. (*Rhinoceros*.)
 Cope, E. D. 1879 B, pp. 58, 235.
 1879 C, p. 229.
 1879 P, p. 333. (*Aphelops*.)
 1879 V, p. 771c. (*Diceratherium*.)
 King, C. 1878 A, p. 424 (*Rhinoceros*.)
 Leidy, J. 1870 P, p. 112. (*Rhinoceros occidentalis*.)
 1873 B, pp. 221, 328, pl. ii, figs. 6, 7; pl. vii,
 figs. 24, 25. (*Rhinoceros*.)
 Lydekker, R. 1881 A, p. 21.
 Matthew, W. D. 1899 A, p. 63.
 Roger, O. 1896 A, p. 188. (*Rhinoceros*.)
 Trouessart, E. L. 1898 A, p. 748.
 Miocene (John Day); Oregon.

Diceratherium truquianum (Cope).

- Cope, E. D. 1879 P, p. 333. (*Aceratherium*.)
 1879 C, pp. 229, 335. (*Aceratherium*.)
 Lydekker, R. 1881 A, p. 21. (*Aceratherium*.)
 Matthew, W. D. 1899 A, p. 63. (*Aceratherium*.)
 Roger, O. 1896 A, p. 188. (*Rhinoceros*.)
 Trouessart, E. L. 1898 A, p. 748. (*A. truquianum*.)
 Miocene (John Day); Oregon.

ELASMOTHERIINÆ.

- Bonaparte, C. L.* 1851, *Conspect. Syst. Mastozool.*, pp. 472-479. (Elasmotheriina.)
Gill, T. 1872 B, pp. 12, 88. (Elasmotheriidae.)
Osborn and Wortman 1892 A, p. 93. (Aceratheriina.)

- Osborn and Wortman* 1895 A, p. 371. (Aceratheriina.)
Osborn, H. F. 1898 I, p. 121. (Aceratheriina.)
 1900 H, p. 240. (Aceratheriina.)
Zittel, K. A. 1893 B, p. 296

ACERATHERIUM Kaup. Type *Rhinoceros incisurus* Cuv.

- Kaup, P.* 1832 B, p. 904.
Branco, W. 1897 A, p. 21.
Brandt, J. F. 1878 A, pp. 11, 37.
Bronn, H. G. 1838 A, p. 1213, pl. xlv, fig. 2.
Cope, E. D. 1874 B, p. 493.
 1879 C, pp. 229, 235.
 1879 P, p. 333.
 1879 V, p. 771a.
 1881 G, p. 393.
 1883 Y.
 1884 O, p. 691. (Aceratherium.)
 1887 K.
 1887 N, p. 1004.
Duvornoy, G. L. 1855 A, p. 51.
Filhol, H. 1891 A, p. 201.
Flower, W. H. 1876 B, xiii, p. 328.
Flower and Lydekker 1889 A, p. 411. (Syn. of *Rhinoceros*.)
Gaudry, A. 1878 B, p. 46.
Hatcher, J. B. 1894 C, p. 240. (Aphelops.)
Leidy, J. 1851 I, p. 331.
 1854 A, p. 81.
Lydekker, R. 1881 A, p. 9.
 1884 B, pp. 2, 8.
 1886 A, p. 91. (Syn. of *Rhinoceros*.)
Marsh, O. C. 1877 E.
Mermier, É. 1896 A, p. 225.
Nicholson and Lydekker 1889 A, p. 1367.
Osborn, H. F. 1890 D, pp. 511, 550 (Aceratherium).
 p. 542 (Aphelops).
 1898 C.
 1898 E, p. 52.
 1898 I.
 1898 P.
 1899 A, p. 161, pl. i.
 1900 H, p. 241. (Aceratherium or Aphelops.)

- Peters, K.* 1870 A.
Pictet, F. J. 1853 A, p. 296.
Pomel, A. 1853 A, p. 76. (Acerotherium.)
Schlosser, M. 1886 A, p. 253.
 1886 B, p. 24 (Aphelops); p. 25 (Aceratherium).
Scott, W. B. 1892 A, p. 431.
 1895 C, p. 122. (Aphelops.)
 1896 B. (Aceratherium, Aphelops.)
Scott and Osborn 1883 A, p. 10 *et seq.*; p. 21. (Aceratherium, Aphelops.)
 1887 B, p. 169.
 1890 B, p. 89 (Aceratherium); p. 92 (Aphelops).
Steinmann and Döderlein 1890 A, p. 774. (Aceratherium, Peraceras, Aphelops.)
Williston, S. W. 1894 E.
Woodward, A. S. 1898 B, p. 334. (Aceratherium.)
Wortman, J. L. 1893 A.
Zittel, K. A. 1893 B, p. 289.

Aceratherium platycephalum Osb. and Wort.

- Osborn and Wortman* 1894 A, p. 206, pl. ii, E; text figs. 2, E; 3, D.
Matthew, W. D. 1899 A, p. 57.
Osborn, H. F. 1898 I, pp. 115, 116, 128, 130, 134, pl. xiii, fig. 9; pl. xviii; text figs. 26, 27, 33, 35.
 1900 H, pp. 240, 243.
Osborn and Wortman 1895 A, p. 373.
Roger, O. 1896 A, p. 188. (Rhinoceros.)
Trouessart, E. L. 1898 A, p. 748.
 Oligocene (White River); South Dakota.

APHELOPS Cope. Type *A. megalodus* Cope.

- Cope, E. D.* 1873 C, p. 1.
Branco, W. 1897 A, p. 21. (Aphelops, Peraceras.)
Brandt, J. F. 1878 A, p. 30.
Cope, E. D. 1875 F, p. 71.
 1877 K, p. 316.
 1879 C, pp. 229, 235.
 1879 P, p. 333.
 1879 V, p. 771a.
 1880 K, p. 540. (Peraceras, type *Aphelops superciliosus*.)
 1881 G, p. 393. (Aphelops, Peraceras.)
 1884 G, pp. 8, 9.
 1884 O, p. 691. (Aphelops, Peraceras.)
 1887 N, p. 1004. (Peraceras.)
Flower, W. H. 1876 B, xiii, p. 328.

Aphelops crassus (Leidy).

- Leidy, J.* 1858 E, p. 28. (Rhinoceros.)
Brandt, J. F. 1878 A, p. 30. (Aceratherium.)

- Cope, E. D.* 1874 B, p. 521. (Aceratherium.)
 1874 P, p. 12.
 1877 K, p. 317.
 1879 C, p. 237.
 1879 V, p. 771j. (Aceratherium.)
Hayden, F. V. 1858 B, p. 157. (Rhinoceros.)
King, C. 1878 A, p. 424. (Diceratherium.)
Leidy, J. 1865 B. (Rhinoceros.)
 1869 A, pp. 228, 390, pl. xxiii, figs. 4-9. (Rhinoceros.)
 1871 C, p. 356. (Rhinoceros.)
Lydekker, R. 1881 A, p. 20. (Aceratherium.)
Matthew, W. D. 1899 A, p. 71. (Syn.? of *Aceratherium megalodum*.)
Scott and Osborn 1890 B, p. 92.
Roger, O. 1896 A, p. 188. (Rhinoceros.)
Trouessart, E. L. 1898 A, p. 751.
 Miocene (Loup Fork); Nebraska, Kansas, Colorado.

Aphelops jemezianus Cope.

Cope, E. D. 1875 P, p. 260.

1875 F, p. 72.

1877 K, pp. 317, 319, pl. lxxiii, figs. 3, 4; pl.

lxxiv, fig. 4.

Lydekker, R. 1881 A, p. 21. (Aceratherium.)

Matthew, W. D. 1899 A, p. 72. (Aceratherium.)

Roger, O. 1896 A, p. 189. (Rhinoceros.)

Trouessart, E. L. 1898 A, p. 751.

Miocene (Loup Fork); New Mexico.

Aphelops malacorhinus Cope.

Cope, E. D. 1878 X, p. 488.

1878 H, p. 383.

1879 C, pp. 229, 237.

1879 V, p. 771i, figs. 7, 8.

1880 K, p. 540. (Peraceras.)

1892 AA. (A. malacorhinus, A. longipes.)

Leidy, J. 1890 A. (Rhinoceros longipes.)

Leidy and Lucas 1896 A, p. 45, pl. x, figs. 11-16;

pl. xi, figs. 3, 4, 11; pl. xiii, figs. 6-8; pl. xiv, fig.

2; pl. xvi, figs. 5-10.

Lydekker, R. 1881 A, p. 21. (Aceratherium.)

Matthew, W. D. 1899 A, p. 71. (?Teleoceras.)

Roger, O. 1896 A, p. 189. (Rhinoceros longipes.)

Trouessart, E. L. 1898 A, p. 75.

Miocene (Loup Fork); Kansas, Florida.

Aphelops? matutinus (Marsh).

Marsh, O. C. 1870 F. (Rhinoceros.)

1893 D, p. 411, pl. x, fig. 4. (Rhinoceros.)

Roger, O. 1896 A, p. 188. (Rhinoceros.)

Trouessart, E. L. 1898 A, p. 748. (Aceratherium.)

Miocene; New Jersey.

Aphelops megalodus Cope.

Cope, E. D. 1873 C, p. 1. (Aceratherium; made type of Aphelops.)

Brandt, J. F. 1878 A, p. 30. (Aceratherium.)

Cope, E. D. 1873 CC, p. 14.

1874 B, p. 520. (Aceratherium.)

1874 P, p. 11.

1875 F, p. 71.

1877 K, p. 317.

1878 X.

Cope, E. D. 1879 C, pp. 229, 237.

1879 V, p. 771c, figs. 1, 2, 4, 5.

1881 J, p. 270.

1889 C, p. 189 *et seq.*

Lydekker, R. 1881 A, p. 21. (Aceratherium.)

1886 A, p. 141. (Rhinoceros.)

Matthew, W. D. 1899 A, p. 71. (Aceratherium.)

Osborn, H. F. 1893 C. (Aceratherium.)

1898 C. (Aceratherium.)

1898 I, p. 115, fig. 26. (Aceratherium.)

Pavlow, M. 1892 A, p. 176. (Aceratherium.)

Roger, O. 1896 A, p. 188. (Syn. of Rhinoceros crassus.)

Trouessart, E. L. 1898 A, p. 751.

Zittel, K. A. 1893 B, p. 291, fig. 232. (Rhinoceros.)

Miocene (Loup Fork); Colorado.

Aphelops meridianus (Leidy).

Leidy, J. 1865 B, p. 176. (Rhinoceros.)

Brandt, J. F. 1878 A, p. 40. (Rhinoceros.)

Cope, E. D. 1875 F, p. 71.

1877 K, pp. 316, 317, pl. lxxiii, figs. 1, 2; pl.

lxxiv, figs. 1-3.

1879 C, pp. 229, 237.

Leidy, J. 1869 A, pp. 229, 390, pl. xxiii, fig. 10. (Rhinoceros.)

1871 C, p. 356. (Rhinoceros.)

Lydekker, R. 1881 A, p. 21. (Aceratherium.)

Matthew, W. D. 1899 A, p. 71. (Syn. of A. malacorhinus.)

Roger, O. 1896 A, p. 189. (Rhinoceros.)

Trouessart, E. L. 1898 A, p. 751.

Miocene (Loup Fork); Texas, New Mexico.

Aphelops profectus (Matth.).

Matthew, W. D. 1899 A, p. 71. (Aceratherium.)

Miocene (Loup Fork); Colorado.

Aphelops superciliosus (Cope).

Cope, E. D. 1880 K, p. 540. (Peraceras.)

1887 N, p. 1004, fig. 18. (Peraceras.)

Matthew, W. D. 1899 A, p. 71. (Teleoceras.)

Osborn, H. F. 1898 I, p. 106, fig. 18; p. 109, fig. 21.

Roger, O. 1896 A, p. 189. (Rhinoceros.)

Trouessart, E. L. 1898 A, p. 751.

Miocene (Loup Fork); Nebraska.

TELEOCERATINÆ.

Osborn, H. F. 1900 H, p. 249. (Brachypodinae.) |

TELEOCERAS Hatcher. Type *T. major* Hatcher.

Hatcher, J. B. 1894 A.

1894 C, p. 241.

Osborn, H. F. 1898 E, p. 51.

1898 I, p. 98. (Syn. of Aceratherium.)

1900 H.

Teleoceras fossiger (Cope).

Cope, E. D. 1878 H, p. 382. (Aphelops.)

1878 X. (Aphelops.)

1879 C, pp. 229, 237. (Aphelops.)

1879 V, p. 771c, figs. 3, 6. (Aphelops.)

1880 E, p. 141. (Aphelops.)

1883 R. (Aphelops.)

1884 G, p. 8. (Aphelops.)

Cope, E. D. 1884 J, p. 309. (Aphelops.)

1884 Q. (Aphelops.)

1887 N, p. 1006, fig. 22. (Aphelops.)

1892 AA. (Aphelops proterus.)

1893 A, p. 20. (Aphelops.)

Hatcher, J. B. 1894 A. (Teleoceras major.)

1894 C, p. 241, pl. i, fig. 1; pl. ii, figs. 2, 6 (Teleoceras major); pl. ii, figs. 3, 5 (Aphelops fossiger).

Leidy, J. 1885 A, p. 33. (Rhinoceros proterus Leidy.)

1886 A, figs. 1, 2. (?Eusyodon maximus.)

1887 A. (Rhinoceros proterus.)

1890 A. (Rhinoceros proterus.)

- Leidy, J. 1892 A. (*Rhinoceros proterus*.)
 Leidy and Lucas 1896 A, p. 41, pls. viii, ix; pl. x, figs. 1-10; pl. xi, figs. 1; 2, 5-10; pl. xii, figs. 1-14; pl. xiii, figs. 1-5; pl. xiv, figs. 1-7; pl. xv, figs. 1-8. (*Aphelops fossiger*, with *Rhinoceros proterus* Leidy a synonym.)
 Lydekker, R. 1881 A, p. 20.
 1884 B, p. 10.
 Marsh, O. C. 1887 B, p. 325, figs. 3, 4. (*Aceratherium acutum*.)
 1897 C, pp. 525, 527, fig. 102. (*Aceratherium acutum*.)
 Matthew, W. D. 1899 A, p. 71.
 Osborn, H. F. 1893 C.
 1898 C, fig. 1. (*Teleoceras*.)

- Osborn, H. F. 1898 E, pls. iv, iv A. (*Teleoceras*.)
 1898 I, pp. 99, 109, 110, figs. 15, 21, 22. (*Aceratherium*.)
 1898 Q, p. 12.
 1900 H, p. 249.
 Paylow, M. 1892 A, p. 176.
 Roger, O. 1896 A, p. 188. (*Rhinoceros*.)
 Scott, W. B. 1893 B, p. 659. (*Aphelops*.)
 Scott and Osborn 1890 B, p. 92, pls. ii, iii, text fig. 15. (*Aphelops*.)
 Trouessart, E. L. 1898 A, p. 751. (*Aphelops*.)
 Williston, S. W. 1894 E, pl. viii. (*Aphelops*.)
 Zittel, K. A. 1893 B, p. 292, fig. 233. (*Aphelops*.)
 Miocene (Loup Fork); Kansas, Nebraska, Colorado, Florida.

RHINOCEROTINÆ.

- Branco, W. 1897 A, p. 21.
 Brandt, 1878 A, p. 25.
 Osborn, H. F. 1898 I, p. 121. (*Ceratorhinæ*.)
 1900 H, p. 264. (*Ceratorhinæ*, *Rhinocerotinæ*.)
 Osborn and Wortman 1892 A, p. 93.
 Roger, O. 1896 A, p. 186. (*Rhinocerinæ*.)
 Trouessart, E. L. 1898 A, p. 747.
 Zittel, K. A. 1893 B, p. 288. (*Rhinocerinæ*.)

Although no species found in North America is here admitted to this subfamily and to the genus *Rhinoceros*, citations to some of the literature of this subfamily and the genus are given below, since the genus *Rhinoceros* is the type of this whole group. For additional bibliography see Osborn 1898 I, pp. 121-125; 1900 H, p. 266.

RHINOCEROS Linn.

- Linnaeus C.*, 1758, Syst. Nat., ed. 10, i, p. 56.
 Brandt, J. F. 1849 B.
 1878 A, p. 33.
 Cope, E. D. 1879 C, p. 229.
 1881 G, p. 393.
 1884 O, p. 692.
 1887 N, p. 1003.
 1889 C, p. 258.
 Cuvier, G. 1834 A, iii, pp. 1-185, with plates.
 Duvornoy, G. L. 1855 A.
 Filhol, H. 1891 A, p. 194.
 Flower, W. H. 1876 A.
 1885 A.
 Flower and Lydekker 1891 A, p. 402.
 Gaudry, A. 1878 B, p. 44.
 Gervais, P. 1859 A, p. 87.
 Gray, J. E. 1867 B, p. 1008.
 1869 A, p. 300.
 Huxley, T. H. 1872 A, p. 307.
 Kowalevsky, W. 1873 A, pp. 219, 222.
 Leidy, J. 1854 A, pp. 79, 114.
 1871 C, p. 356.
 Lydekker, R. 1881 A.
 1886 A, p. 91.
 Meyer, H. 1864 A.
 Nicholson and Lydekker 1889 A, p. 1368.

- Osborn, H. F. 1898 E, p. 52.
 1898 I.
 Owen, R. 1844 A, p. 220.
 1845 B, p. 587.
 1846 A, p. 325.
 Paylow, M. 1888 A, p. 173.
 1892 A.
 Peters, K. 1870 A.
 Roger, O. 1896 A, p. 186.
 Trouessart, E. L. 1898 A, p. 752.
 Zittel, K. A. 1893 B, p. 293.

***Rhinoceroidea alleghaniensis* Featherstonhaugh.**

- Featherstonhaugh, G. W.* 1831 A, pl. i.
 Blainville, H. M. D. 1864 A, *Rhinoceros*, p. 172. (*Rhinoceros*.)
 Giebel, C. G. 1847 A, p. 185.
 Harlan, R. 1834 B, p. 62.
 1835 B, p. 268.
 Leidy, J. 1854 A, pp. 10, 79.
 1869 A, p. 444.

The subject of the above references is now generally conceded to be merely a worn piece of sandstone.

Suborder ARTIODACTYLA Owen.

- Owen, R.* 1848 A, p. 131.
 Baur, G. 1884 F.
 Branco, W. 1897 A, p. 22.
 Burmeister, H. 1867 A, p. 236. (*Paridigitata*.)
 Cope, E. D. 1873 E, p. 562.
 1873 F, p. 39.
 1874 M.
 1880 B, p. 458.

- Cope, E. D. 1881 I, p. 269.
 1881 J.
 1882 A.
 1882 Y.
 1883 D. (*Diplarthra*, part.)
 1884 C.
 1884 H.
 1884 O, pp. 379, 716.

- Cope, E. D. 1884 DD.
 1885 B.
 1886 C, p. 615.
 1887 B.
 1887 N, p. 985.
 1887 S.
 1888 K, p. 163. (Diplarthra, part.)
 1888 X.
 1889 C, p. 148 *et seq.*
 1889 G.
 1891 N, p. 84. (Diplarthra, part.)
 1898 B, p. 125. (Diplarthra, part.)
- Cope and Wortman 1884 A, p. 15.
- Earle, C. 1893 B.
- Flower, W. H. 1873 A.
 1874 A.
 1876 B, xiii, p. 327.
 1883 A.
 1883 D, p. 428.
 1885 A.
- Flower and Lydekker 1891 A, p. 275.
- Gadow, H. 1898 A, p. 48.
- Gegenbaur, C. 1898 A.
- Gill, T. 1872 A, p. 298.
 1872 B, pp. 8, 71.
- Gill and Coues 1877 A, p. 1020.
- Gruber, W. 1859 A. (Multungulata.)
- Haeckel, E. 1895 A, p. 549.
- Hay, O. P. 1899 F, p. 682.
- Huxley, T. H. 1870 A, p. 440.
 1872 A, p. 312.
- Kowalevsky, W. 1874 A.
- Leuthardt, F. 1891 A, p. 121. (Paraxonia.)
- Lydekker, R. 1885 C.
 1885 E, p. 469. (Diplarthra, part.)
 1896 B.
- Marsh, O. C. 1877 E.
 1884 F, p. 177. (Clinodactyla, Paraxonia.)
- Nicholson and Lydekker 1889 A, p. 1313.
- Osborn, H. F. 1893 A, p. 379 *et seq.*
 1893 D.
 1900 C, p. 568.
- Owen, R. 1845 B, p. 527. ("Anisodactyle ungulates.")
 1857 A.
 1866 B, p. 457.
 1868 A, p. 343.
- Paulli, S. 1900 A, p. 193.
- Pavlov, M. 1900 A.
- Pomel, A. 1843 B, p. 326. ("Artiodactyles.")
- Röse, C. 1896 A.
- Roger, O. 1896 A, p. 198.
- Rütimeyer, L. 1865 A. (Ungulata paridigitata.)
 1888 A. (Diplarthra, part.)
- Schmidt, O. 1886 A, p. 137.
- Schlosser, M. 1885 A, p. 684.
 1886 B.
 1888 A.
 1889 A.
 1890 C.
 1890 D.
 1892 A.
- Scott, W. B. 1892 A, p. 433.
- Slade, D. D. 1893 A.
- Steinmann and Döderlein 1890 A, p. 784.
- Tomes, C. S. 1898 A, p. 392.
- Tornier, G. 1888 A.
- Turner, H. N. 1848 A.
- Weber, M. 1886 A, p. 226.
- Weyhe, —. 1875 A, p. 118.
- Wiedersheim, R. 1881 A.
- Woodward, A. S. 1898 B, p. 338.
- Wortman, J. L. 1883 A, p. 706.
 1885 A, p. 297. (Diplarthra, part.)
 1893 B, p. 208. (Diplarthra, part.)
- Zittel, K. A. 1893 B, pp. 315, 727.

Superfamily PANTOLESTOIDEA Cope.

Cope, E. D. 1887 B, p. 378.

| *Cope, E. D.* 1898 B, p. 130. (Trigonolestoidea.)

PANTOLESTIDÆ.

Cope, E. D. 1884 O, p. 719.

1886 C, p. 615.

1887 B, p. 378.

1888 X, p. 1079.

Haeckel, E. 1895 A, p. 554. (Pantolestida.)

Matthew, W. D. 1899 A, pp. 34, 48. (Homacodontidæ, part.)

Roger, O. 1896 A, p. 198.

Steinmann and Döderlein 1890 A, p. 780.

Zittel, K. A. 1893 B, p. 324.

PANTOLESTES Cope. Type *P. longicaudus* Cope.

Cope, E. D. 1872 N, p. 466.

Ameghino, F. 1896 A, p. 444.

Cope, E. D. 1875 C, pp. 13, 15.

1875 L, p. 21.

1877 K, pp. 134, 145.

1882 E, p. 149.

1883 M, p. 547.

1884 H, pp. 21, 25.

1884 O, pp. 215, 717.

1885 B.

1886 C, p. 617.

Marsh, O. C. 1894 L, p. 263. (Homacodon, in part.)

Matthew, W. D. 1899 A, p. 48.

Osborn, H. F. 1893 D, p. 42.

Pavlov, M. 1900 A, p. 59.

Scott, W. B. 1890 A, p. 486.

1891 A, pp. 9, 45, 66.

1892 A, p. 433.

Schlosser, M. 1886 B, p. 39.

Trouessart, E. L. 1898 A, p. 800.

Wortman, J. L. 1898 A, pp. 101, 135.

Zittel, K. A. 1893 B, p. 324.

In many of the papers here cited this genus includes species which are here assigned to *Trigonolestes*. The systematic position of *Pantolestes longicaudus* is in doubt.

Pantolestes longicaudus Cope.

- Cope, *E. D.* 1872 N, p. 467.
 1873 E, p. 549. (Notharctus.)
 1873 U, p. 3. (Notharctus.)
 1882 E, p. 150.
 1883 W, p. 191.

- Cope, *E. D.* 1884 O, pp. 717, 725, pl. xxiv, figs. 13-17.
 1886 C, p. 617.
 Matthew, W. D. 1899 A, p. 48.
 Roger, O. 1896 A, p. 198.
 Trouessart, E. L. 1898 A, p. 800.
 Eocene (Bridger); Wyoming.

TRIGONOLESTES Cope. Type *Pantolestes brachystomus* Cope.

- Cope, *E. D.* 1894 E, p. 868.
 Ameghino, F. 1896 A, p. 444.
 Cope, *E. D.* 1897 B.
 Matthew, W. D. 1899 A, p. 34.
 Osborn and Earle 1895 A, p. 70.
 Scott, W. B. 1899 A, pp. 46, 62.

Trigonolestes brachystomus Cope.

- Cope, *E. D.* 1882 E, p. 187. (Mioclanus.)
 1882 K. (Mioclanus.)
 1883 M, p. 547. (Pantolestes.)
 1884 O, pp. 718, 721, pl. xxiii, figs. 16-21. (Pantolestes.)
 1886 C, p. 617, fig. 8. (Pantolestes.)
 1888 X, p. 1086, fig. 2. (Pantolestes.)
 1894 E, p. 868. (Trigonolestes.)
 Matthew, W. D. 1899 A, p. 34.
 Roger, O. 1896 A, p. 198.
 Schlosser, M. 1886 B, p. 135, pl. v, fig. 19; pl. vi, fig. 29. (Pantolestes.)
 Scott, W. B. 1891 A, p. 46. (Pantolestes.)
 1892 A, pp. 433, 438, fig. 84. (Pantolestes.)
 Trouessart, E. L. 1898 A, p. 800.
 Zittel, K. A. 1893 B, p. 325, fig. 262. (Pantolestes.)
 Eocene (Wasatch); Wyoming.

Trigonolestes chacensis (Cope).

- Cope, *E. D.* 1875 C, p. 15. (Pantolestes.)
 1877 K, p. 146, pl. xlv, fig. 17. (Pantolestes.)
 1882 E, p. 150. (Pantolestes.)
 1884 O, pp. 717, 719, pl. xxiv, fig. 5. (Pantolestes.)
 Matthew, W. D. 1899 A, p. 34. (Trigonolestes.)
 Roger, O. 1896 A, p. 198. (Pantolestes.)
 Trouessart, E. L. 1898 A, p. 800. (Pantolestes.)
 Eocene (Wasatch); Wyoming.

Trigonolestes etsagicus (Cope).

- Cope, *E. D.* 1882 E, p. 189. (Mioclanus.)

- Cope, *E. D.* 1883 M, p. 547. (Pantolestes.)
 1884 O, pp. 717, 724, pl. xxve, fig. 21. (Pantolestes.)
 1886 C, p. 618. (Pantolestes.)
 Matthew, W. D. 1899 A, p. 34. (Trigonolestes.)
 Roger, O. 1896 A, p. 198.
 Trouessart, E. L. 1898 A, p. 800. (Pantolestes.)
 Wortman, J. L. 1898 A, p. 101, footnote. (Syn. of *Eohyus distans*.)
 Eocene (Wasatch); Wyoming.

Trigonolestes metsiacus (Cope).

- Cope, *E. D.* 1882 E, p. 149. (Pantolestes.)
 1884 O, pp. 717, 719, pl. xxiv, fig. 6. (Pantolestes.)
 Matthew, W. D. 1899 A, p. 34. (Trigonolestes.)
 Roger, O. 1896 A, p. 199. (Pantolestes.)
 Trouessart, E. L. 1898 A, p. 800. (Pantolestes.)
 Eocene (Wasatch); Wyoming.

Trigonolestes nuptus Cope.

- Cope, *E. D.* 1882 E, p. 150. (Pantolestes.)
 1884 O, pp. 718, 720, pl. xxiv, fig. 7. (Pantolestes.)
 Matthew, W. D. 1899 A, p. 32. (Trigonolestes.)
 Roger, O. 1896 A, p. 199. (Pantolestes.)
 Trouessart, E. L. 1898 A, p. 800. (Pantolestes.)
 Eocene (Wasatch); Wyoming.

Trigonolestes secans Cope.

- Cope, *E. D.* 1881 D, p. 187. (Pantolestes.)
 1882 E, p. 150. (Pantolestes.)
 1884 O, pp. 717, 725, pl. xxva, fig. 6. (Pantolestes.)
 Matthew, W. D. 1899 A, p. 36. (Trigonolestes?.)
 Roger, O. 1896 A, p. 199. (Pantolestes.)
 Trouessart, E. L. 1898 A, p. 800. (Pantolestes.)
 Eocene (Wind River); Wyoming, Colorado.

HOMACODONTIDÆ.

- Marsh, *O. C.* 1894 L, p. 263.
 Matthew, W. D. 1899 A, pp. 37, 48, part.

- Scott, W. B. 1899 A, p. 84.

HOMACODON Marsh. Type *H. vagans* Marsh.

- Marsh, *O. C.* 1872 G, p. 126.
 Ameghino, F. 1896 A, p. 444.
 Cope, *E. D.* 1873 E, p. 608.
 1894 E, p. 868.
 Flower and Lydekker 1891 A, p. 294.
 Marsh, *O. C.* 1877 E, p. 364.
 1894 L, p. 263.
 Pavlow, M. 1900 A, p. 59.
 Scott, W. B. 1890 A, pp. 485, 486.

- Scott, W. B. 1891 A, pp. 9, 46.
 1898 C, p. 81.
 1899 A, pp. 46, 65.
 Trouessart, E. L. 1898 A, p. 800. (Syn. of *Pantolestes*.)
 Woodward, A. S. 1898 B, p. 341.
 Wortman, J. L. 1898 A, pp. 94, 98, 101, 102, 135.
 Zittel, K. A. 1893 B, p. 361.

Homacodon priscus Marsh.

Marsh, O. C. 1894 L, p. 261, fig. 3.
 Roger, O. 1896 A, p. 199. (Pantolestes.)
 Trouessart, E. L. 1898 A, p. 800. (Pantolestes.)
 Eocene; Wyoming, New Mexico.

Homacodon pucillus Marsh.

Marsh, O. C. 1894 L, p. 261, fig. 4.
 Roger, O. 1896 A, p. 199. (Pantolestes.)
 Trouessart, E. L. 1898 A, p. 800. (Pantolestes.)
 Eocene; Wyoming, New Mexico.

Homacodon vagans Marsh.

Marsh, O. C. 1872 G, p. 126.
 Cope, E. D. 1894 E, p. 868.
 King, C. 1878 A, p. 404.
 Marsh, O. C. 1894 L, p. 262, figs. 5-8.
 Matthew, W. D. 1899 A, p. 48.
 Roger, O. 1896 A, p. 199. (Pantolestes.)
 Scott, W. B. 1891 A, p. 486.
 Trouessart, E. L. 1898 A, p. 800. (Pantolestes.)
 Woodward, A. S. 1898 A, p. 342, fig. 196.
 Eocene (Bridger); Wyoming.

NANOMERYX Marsh. Type *N. caudatus* Marsh.

Marsh, O. C. 1894 L, p. 263.

Nanomeryx caudatus Marsh.

Marsh, O. C. 1894 L, p. 263, figs. 9, 10.
 Cope, E. D. 1894 E, p. 868.

Matthew, W. D. 1899 A, p. 48.
 Roger, O. 1896 A, p. 199.
 Trouessart, E. L. 1898 A, p. 801.
 Eocene (Bridger); Wyoming.

BUNOMERYX Wort. Type not indicated; *B. elegans*, being figured, may be taken.

Wortman, J. L. 1898 A, p. 97.
 Scott, W. B. 1899 A, p. 84.

Bunomeryx elegans Wort.

Wortman, J. L. 1898 A, p. 100, fig. 2.
 Matthew, W. D. 1899 A, p. 50.
 Trouessart, E. L. 1899 A, p. 1348.
 Eocene (Uinta); Utah.

Bunomeryx montanus Wort.

Wortman, J. L. 1898 A, p. 97.
 Matthew, W. D. 1899 A, p. 50.
 Trouessart, E. L. 1899 A, p. 1348.
 Eocene (Uinta); Utah.

HELOHYIDÆ.

Marsh, O. C. 1877 E, p. 364.
 Cope, E. D. 1892 S, p. 411.
 Marsh, O. C. 1892 C, p. 352.

Matthew, W. D. 1899 A, p. 48. (Homacodontidæ,
 in part.)
 Scott, W. B. 1890 A, p. 485.

HELOHYUS Marsh. Type *H. plicodon* Marsh.

Marsh, O. C. 1872 I, p. 207.
 Cope, E. D. 1873 D, p. 3. ("Thinotherium," of Marsh.)
 1892 S, p. 411.
 1894 E, p. 868. (Syn. of Phenacodus.)
 Marsh, O. C. 1872 I, p. 208. (Thinotherium, type *T. validum*; not Thinotherium Cope, 1870.)
 1877 E.
 1892 C, p. 351.
 1894 L, p. 264.
 Schlosser, M. 1886 B, p. 12. (Syn.? of Phenacodus.)
 Scott, W. B. 1889 C, p. 76.
 1890 A, pp. 486, 502.
 1890 B, p. 366.
 Wilckens, M. 1885 B, p. 303.
 Wortman, J. L. 1898 A, p. 94.
 Zittel, K. A. 1893 B, p. 220. (Thinotherium Marsh.)

Marsh, O. C. 1878, in King, C. 1878 A, p. 404. (Helo-hyus.)
 1894 L, p. 265, fig. 16.
 Matthew, W. D. 1899 A, p. 48.
 Roger, O. 1896 A, p. 167. (Phenacodus?.)
 Trouessart, E. L. 1898 A, p. 726. (Phenacodus.)
 Eocene (Bridger); Wyoming.

Helohyus plicodon Marsh.

Marsh, O. C. 1872 I, p. 207.
 1894 L, p. 264, figs. 11-14, 17.
 Matthew, W. D. 1899 A, p. 48.
 Roger, O. 1896 A, p. 166. (Phenacodus?.)
 Scott, W. B. 1890 B, pl. xiv, fig. 14.
 Eocene (Bridger); Wyoming.

Helohyus validus Marsh.

Marsh, O. C. 1872 I, p. 208. (Thinotherium.)
 1894 L, p. 265, fig. 15.
 Matthew, W. D. 1899 A, p. 48.
 Roger, O. 1896 A, p. 166. (Phenacodus?.)
 Eocene (Bridger); Wyoming.

EOHYIDÆ.

Marsh, O. C. 1894 L, p. 260.

| Cope, E. D. 1894 E, p. 867.

Eohyus Marsh. Type *E. distans* Marsh.

- Marsh, O. C.* 1894 L, p. 259.
Cope, E. D. 1894 E, p. 868.
Marsh, O. C. 1877 E. (No description.)
Matthew, W. D. 1899 A, p. 32, footnote.
Wilckens, M. 1885 B, p. 303. (No description.)

Eohyus distans Marsh.

- Marsh, O. C.* 1894 L, p. 259, fig. 1.
Matthew, W. D. 1899 A, p. 32.
Roger, O. 1896 A, p. 199.

- Trouessart, E. L.* 1898 A, p. 801.
Wortman, J. L. 1898 A, p. 101, footnote.
 Eocene (Wasatch); New Mexico.

Eohyus robustus Marsh.

- Marsh, O. C.* 1894 L, p. 260.
Matthew, W. D. 1899 A, p. 32.
Roger, O. 1896 A, p. 199.
Trouessart, E. L. 1898 A, p. 801.
 Eocene (Wasatch); New Mexico.

Superfamily ANTHRACOTHERIOIDEA Gill.

- Gill, T.* 1872 B, pp. 11, 83.
Cope, E. D. 1898 B, p. 130.

- Owen, R.* 1848 A, p. 116. (Anthracotheria.)

ANTHRACOTHERIIDÆ.

- Blainville, H. M. D.* 1864 A, iv, Y, p. 121, with plates.
Branco, W. 1897 A, p. 23.
Cope, E. D. 1884 H, p. 26. (Hyopotamidæ.)
 1885 B, p. 489. (Hyopotamidæ.)
 1888 X, pp. 1080, 1085.
Flower and Lydekker 1891 A, p. 292.
Gill, T. 1872 B, pp. 11, 83.
Haeckel, E. 1895 A, p. 554. (Anthracotherida.)
Kowalevsky, W. 1873 A. (Anthracotheriidæ, Hyopotamidæ.)
 1874 A. (Hyopotamidæ.)
Leidy, J. 1869 A, p. 202.
 1871 C, p. 355.
Lydekker, R. 1883 A, p. 147.
 1885 C, p. 215.
Marsh, O. C. 1894 F, p. 92.
 1894 K, p. 178. (Ancodontidæ.)

- Meyer, H.* 1856 B, pp. 61-66.
Nicholson and Lydekker 1889 A, p. 1324.
Osborn and Wortman 1894 A, p. 219.
Pavlow, M. 1900 A, p. 18.
Pomel, A. 1848 B, p. 321. ("Les Anthracotheriums.")
Roger, O. 1896 A, p. 199.
Rütimeyer, L. 1857 A. ("Anthracotherien.")
Schlosser, M. 1886 A, p. 255.
 1886 B, p. 79.
Scott, W. B. 1890 B, p. 392. (Hyopotamidæ.)
Steinmann and Döderlein 1890 A, p. 792.
Teller, F. 1884 A.
Trouessart, E. L. 1898 A, p. 801.
Woodward, H. 1898 B, p. 348.
Wortman, J. L. 1886 A, p. 485.
Zittel, K. A. 1893 B, p. 325.

ANTHRACOTHERIINÆ.

- Roger, O.* 1896 A, p. 199.
Trouessart, E. L. 1898 A, p. 801.

- Zittel, K. A.* 1893 B, p. 327.

ANTHRACOTHERIUM Cuv. Type *A. magnum* Cuv.

- Cuvier, G.* 1822, Oss. Foss., iii, p. 396.
Bayle, E. 1855 A.
Blainville, H. M. D. 1864 A, iv, Y, p. 121, pls. i-iii.
Bronn, H. G. 1838 A, p. 1225; pl. xlvi, fig. 4.
Cuvier, G. 1834 A, p. 464, pl. 161.
Filhol, H. 1891 B, p. 89.
Flores, E. 1897 A, p. 92.
Gaudry, A. 1878 B, pp. 42, 94.
Gervais, P. 1859 A, p. 189.
Hoernes, R. 1875 A.
 1876 A.
 1877 A.
Kowalevsky, W. 1873 A.
Lydekker, R. 1883 A, p. 148.
 1885 C, p. 235.
Marsh, O. C. 1894 C, p. 409. (Heptacodon, type *H. curtus*.)
 1894 F, p. 92. (Heptacodon.)
 1894 K, p. 178. (Heptacodon.)

- Meyer, H.* 1834 A, p. 59.
 1854 A.
Nicholson and Lydekker 1889 A, p. 1324.
Osborn and Wortman 1894 A, p. 222.
Owen, R. 1845 B, p. 567.
 1848 A, p. 109.
Pavlow, M. 1900 A, p. 21.
Pictet, F. J. 1853 A, p. 332.
Pomel, A. 1847 A, pp. 203, 207.
 1847 C, p. 381.
 1848 B, p. 324.
 1853 A, p. 89.
Renevier, E. 1879 A.
Rütimeyer, L. 1857 A.
 1857 B.
 1857 C.
Teller, F. 1884 A.
Woodward, A. S. 1898 B, p. 348.
Zittel, K. A. 1893 B, p. 327.

Anthracotherium curtum (Marsh.)

- Marsh, O. C. 1894 C, p. 409. (Heptacodon.)
 1894 K, p. 176, fig. 1. (Heptacodon.)
 Matthew, W. D. 1899 A, p. 58.
 Osborn and Wortman 1894 A, p. 221, figs. 6, 7 (A. curtum?); p. 223 (A. occidentale).
 Roger, O. 1896 A, p. 200. (A. curtum, A. occidentale.)
 Trouessart, E. L. 1898 A, p. 803. (A. curtum, A. occidentale.)
 Oligocene (White River); South Dakota.

Anthracotherium gibbiceps (Marsh.)

- Marsh, O. C. 1894 K, p. 175, fig. 2. (Heptacodon.)
 Matthew, W. D. 1899 A, p. 59.
 Roger, O. 1896 A, p. 201.
 Trouessart, E. L. 1898 A, p. 803.
 Oligocene (White River); South Dakota?.

Anthracotherium karensense Osb. and Wort.

- Osborn and Wortman 1894 A, p. 222, fig. 8.
 Matthew, W. D. 1899 A, p. 59.
 Roger, O. 1896 A, p. 200.
 Trouessart, E. L. 1898 A, p. 803.
 Oligocene (White River); South Dakota.

OCTACODON Marsh. Type *O. valens* Marsh.

- Marsh, O. C. 1894 F, p. 92.
 1894 K, p. 178.
 Trouessart, E. L. 1898 A, p. 801. (Syn. of Anthracotherium.)

Octacodon valens Marsh.

- Marsh, O. C. 1894 F, p. 92, fig. 1.
 1894 K, p. 178, fig. 6.

- Matthew, W. D. 1899 A, p. 59. (Syn. of Anthracotherium karensense.)
 Roger, O. 1896 A, p. 201. (Anthracotherium.)
 Trouessart, E. L. 1898 A, p. 103. (Anthracotherium.)
 Oligocene (White River); South Dakota.

ELOMERYX Marsh. Type *Heptacodon armatus* Marsh.

- Marsh, O. C. 1894 K, p. 176.

Elomeryx armatus Marsh.

- Marsh O. C. 1894 F, p. 93, fig. 2. (Heptacodon.)
 1894 K, p. 176, figs. 3, 4.
 Matthew, W. D. 1899 A, p. 59. (Syn. of Anthracotherium karensense.)
 Roger, O. 1896 A, p. 201.
 Trouessart, E. L. 1898 A, p. 804.
 Oligocene (White River); South Dakota.

Elomeryx mitis Marsh.

- Marsh, O. C. 1894 K, p. 177, fig. 5.
 Matthew, W. D. 1899 A, p. 59. (Anthracotherium.)
 Roger, O. 1896 A, p. 201.
 Trouessart, E. L. 1898 A, p. 804.
 Oligocene (White River); South Dakota?.

ANCODON Pomel. Type *A. velarum* Pomel.

- Pomel A., 1847, Arch. Sci. Phys. et Nat., Genève, v, p. 207.

Unless otherwise indicated, the following authors use the name *Hyopotamus* for this genus. *Ancodon* antedates it. *Ancodon* was afterwards emended into *Ancodus*.

- Aymard, A., 1848, Ann. Soc. Agri. et Sci., du Puy, xii. (Bothriodon, type *B. platyrhynchus*.)
 Cope, E. D. 1887 A, p. 383.
 1888 X, p. 1086.
 1889 C, p. 163.
 Filhol, H. 1882 A, p. 85. (Ancodus.)
 Gaudry, A. 1878 B, p. 94.
 Gervais, P. 1859 A, p. 191.
 Kowalevsky, W. 1874 A.
 Leidy, J. 1869 A, p. 202.
 1871 C, p. 355.
 Lydekker, R. 1883 A, p. 154.
 1885 A, p. 218.
 Major, Fors. 1873 A, p. 101.
 Marsh, O. C. 1894 K, p. 178. (Ancodus.)
 Nicholson and Lydekker 1889 A, p. 1325.
 Owen, R. 1848 A, p. 104. (Hyopotamus, type *H. bovinus*.)
 Pavlow, M. 1900 A, p. 19.

- Pomel, A. 1848 B, p. 322. (Ancodus.)
 1853 A, p. 91. (Ancodus.)

- Rütimeyer, L. 1891 A, p. 56.
 Schlosser, M. 1886 B, p. 79.
 Scott, W. B. 1890 A, p. 488,
 1894 C.
 1894 D. (Ancodus.)
 1894 E. (Ancodus.)
 Steinmann and Döderlein 1890 A, p. 794.
 Trouessart, E. L. 1898 A, p. 804.
 Woodward, A. S. 1898 B, p. 349.
 Wortman, J. L. 1893 A.
 Zittel, K. A. 1893 B, p. 329. (Ancodus.)

Ancodon americanus (Leidy).

- Leidy, J. 1856 D, p. 59. (Hyopotamus.)
 Hayden, F. V. 1858 B, p. 157. [Chæropotamus (Hyopotamus).]
 King, C. 1878 A, p. 411. (Hyopotamus.)
 Leidy, J. 1856 B, p. 422. (Hyopotamus.)
 1857 C, p. 89. [Chæropotamus (Hyopotamus).]
 1869 A, pp. 202, 389, pl. xxi, figs. 1-6. (Hyopotamus.)
 1871 C, p. 355. (Hyopotamus.)

Marsh, O. C. 1890 D, p. 524. (*Hyopotamus deflectus*.)

1894 K, p. 178, fig. 7. (*Ancodus deflectus*.)

Matthew, W. D. 1899 A, p. 59. (*Hyopotamus americanus*, H. deflectus.)

Osborn and Wortman 1894 A, p. 219, fig. 6, A. (*Hyopotamus*.)

Roger, O. 1896 A, p. 202. (*Hyopotamus americanus*, H. deflectus.)

Scott, W. B. 1894 E, p. 461, pl. xxxiii, figs. 2, 3 (*Ancodus americanus*); p. 461 (A. deflectus).

Trouessart, E. L. 1898 A, p. 806. (*Hyopotamus americanus*, H. deflectus.)

Oligocene (White River); South Dakota.

An examination of the type of Professor Marsh's *Hyopotamus deflectus* shows that the character on which the species was based holds good on only one side.

Ancodon brachyrhynchus (Osb. and Wort.).

Osborn and Wortman 1894 A, p. 220, fig. 6 B. (*Hyopotamus*.)

Matthew, W. D. 1899 A, p. 59. (*Hyopotamus*.)

Roger, O. 1896 A, p. 202. (*Hyopotamus*.)

Scott, W. B. 1894 D, p. 492. (*Ancodus*.)

1894 E, pl. xxiii, fig. 1; pl. xxiv, figs. 5-8. (*Ancodus*.)

Trouessart, E. L. 1898 A, p. 806. (*Hyopotamus*.)

Woodward, A. S. 1898 B, p. 350, fig. 200. (*Hyopotamus*.)

Oligocene (White River); South Dakota.

Ancodon rostratus Scott.

Scott, W. B. 1894 E, appendix, p. 536. (*Ancodus*.)

Oligocene (White River); South Dakota.

Superfamily SUOIDEA.

Cope, E. D. 1885 B, p. 482. (*Bunodonta*.)

1887 B, p. 378. (*Bunodonta*.)

1898 B, p. 130.

Flower, W. H. 1873 A. (*Suina*.)

1874 A. (*Suina*.)

1876 B, xiii, p. 328. (*Suina*.)

1883 D, p. 430. (*Bunodonta*.)

1885 A. (*Suina*.)

Flower and Lydekker 1891 A, p. 278. (*Suina*.)

Gray, J. E. 1868 A, p. 22. (*Suina*.)

1869 A, p. 238. (*Suina*.)

Kowalevsky, W. 1873 A, p. 152. (*Bunodonta*, in part.)

Lydekker, R. 1883 A. (*Suina*, *Bunodontia*, in part.)

1884 C. (*Suina*, *Bunodontia*, in part.)

Marsh, O. C. 1877 E. (*Bunodonta*.)

Tomes, C. S. 1898 A, p. 392. (*Suina*.)

SUIDÆ.

Baur, G. 1884 F, p. 598.

Blainville, H. M. D. 1864 A, iv, AA, p. 105.

Branco, W. 1897 A, p. 23.

Cope, E. D. 1887 B, pp. 378, 384.

1888 X, pp. 1080, 1090.

Cope and Wortman 1884 A, p. 16.

Coues, E. 1878 A.

Cuvier, G. 1834 A, p. 221 *et seq.*, with plates.

Flower, W. H. 1873 A.

Flower and Lydekker 1891 A, p. 281.

Garrod, A. H. 1877 A.

Gray, J. E. 1868 A.

1869 A, p. 327.

Haeckel, E. 1895 A, p. 555. (*Suida*.)

Huxley, T. H. 1870 A, p. 440.

1872 A, p. 313.

Leidy, J. 1871 C, p. 352.

Lydekker, R. 1884 C, p. 49.

1885 C, p. 250.

Nicholson and Lydekker 1889 A, p. 1318.

Osborn, H. F. 1883 A, p. 34.

Owen, R. 1845 B, p. 543.

Parker, W. K. 1874 B.

Roger, O. 1896 A, p. 202.

Rütimeyer, L. 1857 B. ("Schweine.")

1862 B. ("Schweine.")

Schlosser, M. 1886 A, p. 255.

1886 B, p. 82.

1890 C, p. 273.

Schmidt, O. 1886 A, p. 137.

Slade, D. D. 1893 A.

Smith, J. 1895 A, p. 340.

Stehlin, H. G. 1899 A.

Steinmann and Döderlein 1890 A, p. 794.

Taeker, J. 1892 A.

Trouessart, E. L. 1898 A, p. 808.

Turner, H. N. 1848 A.

Weyhe, — 1875 A, p. 120.

Wilckens, M. 1885 B.

Woodward, A. S. 1898 B, p. 341.

Zittel, K. A. 1893 B, p. 331.

ACHÆNODONTINÆ.

Cope, E. D. 1887 B, p. 378. (*Elotheriidae*.)

1888 X, p. 1089. (*Elotheriinae*.)

Marsh, O. C. 1893 D, p. 410. (*Elotheriidae*.)

1894 B, p. 408. (*Elotheriidae*.)

1894 H. (*Elotheriidae*.)

Osborn, H. F. 1893 D, p. 41. (*Elotheriidae*.)

Roger, O. 1896 A, p. 203.

Stehlin, H. G. 1899 A, p. 123. ("Elotherien.")

Trouessart, E. L. 1898 A, p. 808. (*Achænodontinae*.)

Zittel, K. A. 1893 B, p. 334. (*Achænodontinae*.)

Possibly the subfamily name *Elotheriinae* has priority.

ACHÆNODON Cope. Type *A. insolens* Cope.

- Cope, E. D. 1873 D, p. 2.
 Ameghino, F. 1896 A, p. 144.
 Cope, E. D. 1874 B, p. 457.
 1883 I, p. 77.
 1883 II, p. 969.
 1884 O, pp. 259, 342, 738.
 1884 Z, p. 718.
 1885 K, p. 469.
 1887 S, p. 261.
 Lydekker, R. 1885 E, p. 470.
 Nicholson and Lydekker 1889 A, p. 1323.
 Osborn, H. F. 1883 A, p. 26.
 Schlosser, M. 1885 A, p. 684.
 1886 B, p. 39.
 1887 B, p. 220.
 Zittel, K. A. 1893 B, p. 234.

Achænodon insolens Cope.

- Cope, E. D. 1873 D, p. 2.
 1874 B, pp. 457, 463.

- Cope, E. D. 1874 M, p. 78, fig. 5.
 1882 JJ, p. 534.
 1884 O, p. 343, pls. lviii, lviii.
 1885 K, p. 470, fig. 17.
 Matthew, W. D. 1899 A, pp. 48, 50.
 Osborn, H. F. 1883 A, p. 24.
 1895 A, p. 105.
 Roger, O. 1896 A, p. 203.
 Trouessart, E. L. 1898 A, p. 808.
 Eocene (Bridger); Wyoming: (Uinta); Utah.

Achænodon robustus Osb.

- Osborn, H. F. 1883 A, p. 24, pl. vi.
 Cope, E. D. 1885 K, p. 471, fig. 18.
 Matthew, W. D. 1899 A, p. 48.
 Osborn, H. F. 1895 A, p. 103.
 Roger, O. 1896 A, p. 203.
 Trouessart, E. L. 1898 A, p. 808.
 Zittel, K. A. 1893 B, p. 335, fig. 270.
 Eocene (Bridger); Wyoming.

PARAHYUS Marsh. Type *P. vagus* Marsh.

- Marsh, O. C. 1876 H, p. 402.
 Cope, E. D. 1894 E, p. 868.
 Marsh, O. C. 1877 E.
 Nicholson and Lydekker 1889 A, p. 1323.
 Osborn, H. F. 1883 A, pp. 23, 24.
 1893 D, p. 41.
 Trouessart, E. L. 1898 A, p. 808. (Syn. of Achænodon.)
 Wilckens, M. 1885 B, p. 305.
 Zittel, K. A. 1893 B, p. 334. (Syn.? of Achænodon.)
Parahyus aberrans Marsh.
 Marsh, O. C. 1894 L, p. 261, fig. 2.
 Matthew, W. D. 1899 A, p. 34.
 Roger, O. 1896 A, p. 203. (Achænodon.)

- Trouessart, E. L. 1898 A, p. 808. (Achænodon.)
 Eocene (Bridger); Wyoming.

Parahyus vagus Marsh.

- Marsh, O. C. 1876 H, p. 402.
 Roger, C. 1878 A, p. 377. (P. vagans.)
 Matthew, W. D. 1899 A, p. 34.
 Osborn, H. F. 1883 A, p. 24 [Achænodon (Parahyus).]
 Roger, O. 1896 A, p. 203. (Achænodon.)
 Scott, W. B. 1898 A, p. 323. (Achænodon.)
 Trouessart, E. L. 1898 A, p. 808. (Achænodon.)
 Wilckens, M. 1885 B, p. 305.
 Eocene (Bridger); Wyoming.

PROTELOTHERIUM Osb. Type *Elothierium uintense* Osb.

- Osborn, H. F. 1895 A, p. 105.
Protelotherium uintense Osb.
 Osborn, H. F. 1895 A, p. 102, figs. 16, 17 (Elothierium); p. 105 (Protelotherium).

- Matthew, W. D. 1899 A, p. 50.
 Roger, O. 1896 A, p. 203. (Elothierium.)
 Scott, W. B. 1898 A, p. 323. (Achænodon.)
 Trouessart, E. L. 1898 A, p. 808.
 Eocene (Uinta); Utah.

ELOTHERIUM Pomel. Type *E. magnum* Pomel.

- Pomel, A. 1847 B, p. 307.
 Aymard, A., 1848, Sci. et Bell. Lett. du Puy, xii, p. 240. (Entelodon.)
 Cope, E. D. 1874 B, p. 504. (Pelonax, type *P. ramosus*.)
 1879 B, p. 59. (Boëcherus, type *B. humerosus*.)
 1884 H, p. 22.
 1885 B, p. 483.
 1888 X, p. 1088.
 1889 C. (Elothierium, Boëcherus.)
 Filhol, H. 1882 A, p. 190.
 Flower, W. H. 1873 A.
 Flower and Lydekker 1891 A, p. 292.
 Gaudry, A. 1877 A. (Entelodon.)
 1878 B, p. 92. (Entelodon.)

- Gervais, P. 1859 A, p. 194. (Entelodon.)
 Greene, F. V. 1853 A. (Archæotherium.)
 Grinnell and Dana 1876 A.
 Hoernes, R. 1892 A. (Entelodon.)
 Kowalevsky, W. 1873 A, p. 258. (Entelodon.)
 1876 A, p. 415. (Entelodon.)
 Leidy, J. 1850 A, p. 90. (Archæotherium, type *A. mortoni* Leidy.)
 1851 J. (Aretodon.)
 1852 J, p. 558. (Archæotherium.)
 1852 L, p. 64. (Archæotherium.)
 1854 A, pp. 57, 114. (Archæotherium.)
 1869 A, pp. 174, 388.
 1871 C, p. 353.
 Lydekker, R. 1885 C, p. 249.
 1896 B, p. 161.

Marsh, O. C. 1877 E.

1894 B, pl. ix.

1894 H.

Nicholson and Lydekker 1889 A, p. 1323.

Osborn, H. F. 1883 A, p. 23. (Entelodon.)

Pictet, F. J. 1853 A, p. 328.

Pomel, A., 1847, Bull. Soc. Géol. France, iv, p. 1083.

1848 B, p. 325.

1853 A, p. 88.

Schlosser, M. 1886 B, p. 80. (Entelodon.)

Scott, W. B. 1884 B.

1896 A.

1898 A.

Stehlin, H. G. 1899 A, pp. 121, 122.

Steinmann and Döderlein 1890 A, p. 793. (Entelodon.)

Trouessart, E. L. 1898 A, p. 808.

Wilckens, M. 1885 B, pp. 210, 216, 217.

Woodward, A. S. 1898 B, p. 343.

Zittel, K. A. 1893 B, p. 335 (Elotherium); p. 337 (Boöcherus).

Elotherium clavum Marsh.

Marsh, O. C. 1893 D, p. 409, pl. ix, fig. 1.

1897 C, p. 523, fig. 97. (Entelodon.)

Matthew, W. D. 1899 A, p. 59.

Roger, O. 1896 A, p. 204.

Trouessart, E. L. 1898 A, p. 810.

Oligocene (White River); South Dakota?, Colorado.

Elotherium coarctatum Cope.

Cope, E. D. 1889 O, p. 629.

1886 U, p. 84. (E. mortoni.)

1891 A, p. 20, pl. xiv, fig. 3. (E. arctatum.)

Matthew, W. D. 1899 A, p. 59. (E. arctatum.) *

Roger, O. 1896 A, p. 204. (E. arctatum.)

Oligocene (White River); Northwest Territory, Canada.

Elotherium crassum Marsh.

Marsh, O. C. 1873 H, p. 487,

Cope, E. D. 1874 B, p. 504. (Pelonax?).

King, C. 1878 A, p. 411.

L. P. B. 1885 A, p. 193, fig. 27.

Lydekker, R. 1896 B, p. 162, fig. 35.

Marsh, O. C. 1884 F, fig. 75.

1885 B, fig. 108.

1893 D, p. 408, pl. viii.

1894 B, pl. ix.

1894 H, pl. x.

1897 C, pl. xxx. (Entelodon.)

Matthew, W. D. 1899 A, p. 59.

Roger, O. 1896 A, p. 204.

Stehlin, H. G. 1899 A, p. 123.

Trouessart, E. L. 1898 A, p. 809.

Woodward, A. S. 1898 B, p. 344, fig. 197.

Zittel, K. A. 1893 B, p. 337, fig. 373.

Oligocene (White River); South Dakota, Colorado?.

Elotherium humerosum (Cope).

Cope, E. D. 1879 B, p. 59. (Boöcherus.)

1879 H, p. 131. (Boöcherus.)

Matthew, W. D. 1899 A, p. 64. (Boöcherus.)

Roger, O. 1896 A, p. 204. (Boöcherus.)

Trouessart, E. L. 1898 A, p. 810. (Boöcherus.)

Wortman, J. L. 1898 A, p. 120, footnote.

Miocene (John Day); Oregon.

Probably identical with *E. imperator*.

Elotherium imperator Leidy.

Leidy, J. 1873 B, pp. 217, 320 (E. imperator); pl. ii, figs. 3, 4 (E. superbum); pl. vii, fig. 2 (E. imperator).

Cope, E. D. 1874 B, p. 505. (E. superbum.)

1879 B, p. 58.

1888 X, p. 1090.

Leidy, J. 1870 P, p. 112. (E. superbum.)

Matthew, W. D. 1899 A, p. 63.

Scott, W. B. 1898 A.

Trouessart, E. L. 1898 A, p. 809. (Syn. of E. superbum.)

Miocene (John Day); Oregon.

Elotherium ingens Leidy.

Leidy, J. 1856 J, p. 164. (Entelodon.)

1857 D, p. 175. (Elotherium.)

1858 B, p. 157. (Entelodon.)

1869 A, pp. 192, 388, pl. xxvii, figs. 8-11.

1870 P, p. 112.

1871 C, p. 353.

1873 B, p. 320.

Matthew, W. D. 1899 A, p. 59.

Scott, W. B. 1896 A.

1898 A, pl. xvii; pl. xviii, figs. 3-12.

Trouessart, E. L. 1898 A, p. 809. (Syn. E. robustum.)

Oligocene (White River); South Dakota.

Elotherium mortoni Leidy.

Leidy, J. 1850 A, p. 90. (Archæotherium.)

Ami, H. M. 1891 A.

Cope, E. D. 1885 H. (Entelodon.)

1886 U, p. 84.

1888 X, p. 1089.

1889 I, p. 155.

Dawkins, W. B. 1870 A. (Archæotherium.)

Greene, F. V. 1853 A, p. 66. ("Archæotherium.")

Hayden, F. V. 1858 B, p. 157.

Hoernes, R. 1892 A. (Entelodon.)

King, C. 1878 A, p. 411.

Leidy, J. 1851 J, p. 278. ("Arctodon.")

1852 J, p. 558, pl. x, figs. 1-3; pl. xi, fig. 1 (Archæotherium mortoni); p. 572 (A. robustum).

1852 L, p. 64 (Archæotherium mortoni); p. 65 (Arctodon vetustum).

1853 D, p. 392. (Entelodon.)

1854 A, pp. 57, 114, pls. viii, ix; pl. x, figs. 1-7 (Archæotherium mortoni); pp. 66, 114, pl. x, figs. 8-13 (A. robustum).

1854 E, p. 157. (Entelodon.)

1857 D, p. 175.

1869 A, pp. 175, 388, pl. xvi.

1871 C, p. 353.

1873 B, pp. 125, 320, pl. vii, figs. 28, 29.

Matthew, W. D. 1899 A, p. 59.

Roger, O. 1896 A, p. 204. (E. mortoni, E. robustum.)

Scott, W. B. 1898 A, pl. xviii, figs. 1, 2.

Scott and Osborn 1887 B, p. 156. (Entelodon.)

Trouessart, E. L. 1898 A, p. 809.

Wortman, J. L. 1893 A, p. 97.

Zittel, K. A. 1893 B, p. 336, fig. 271.

Oligocene (White River); South Dakota, Nebraska, Colorado.

Elotherium ramosum Cope.

Cope, E. D. 1874 P, p. 27.

1874 B, pp. 463, 504. (Pelonax.)

1883 F, p. 217.

1888 X, p. 1089.

Matthew, W. D. 1899 A, p. 59.

Osborn, H. F. 1896 C, pp. 713, 715, illus. 9.

1898 Q, p. 16.

Roger, O. 1896 A, p. 204.

Trouessart, E. L. 1898 A, p. 809.

Oligocene (White River); Colorado, North Dakota.

Elotherium superbum Leidy.

Leidy, J. 1868 B.

Cope, E. D. 1874 B, p. 505.

Dana, J. D. 1879 A, p. 233.

King, C. 1878 A, p. 411.

Leidy, J. 1869 A, p. 388.

1871 C, p. 353.

Roger, O. 1896 A, p. 204.

Trouessart, E. L. 1898 A, p. 809.

Whitney, J. D. 1879 A, p. 244.

Miocene; California.

AMMODON Marsh. Type *A. leidyanum* Marsh.

Marsh, O. C. 1893 D, p. 409.

Trouessart, E. L. 1898 A, p. 808. (Syn. of *Elotherium*.)

Ammodon bathrodon Marsh.

Marsh, O. C. 1874 C, p. 534. (*Elotherium*.)

King, C. 1878 A, p. 411. (*Elotherium*.)

Marsh, O. C. 1893 D, p. 410, pl. ix, fig. 4.

Matthew, W. D. 1899 A, p. 59. (*Elotherium*.)

Roger, O. 1896 A, p. 204. (*Elotherium*.)

Trouessart, E. L. 1898 A, p. 808. (*Elotherium*.)

Oligocene (White River); South Dakota?

Ammodon leidyanus Marsh.

Marsh, O. C. 1893 D, p. 409, pl. ix.

Cope, E. D. 1869 N, p. 740. (*Elotherium*.)

Leidy, J. 1869 A, p. 388. (*Elotherium*.)

Marsh, O. C. 1871 F, p. 10. (*Elotherium*; no description.)

1874 C, p. 534. (*Elotherium*; no description.)

Roger, O. 1896 A, p. 204. (*Elotherium*.)

Oligocene (White River); Colorado?

Trouessart, E. L. 1898 A, p. 808. (*Elotherium*.)

Miocene; New Jersey.

Not any of the literature of this species previous to 1893 contains an adequate description.

Ammodon potens Marsh.

Marsh, O. C. 1893 D, p. 410.

1897 C, p. 527.

Matthew, W. D. 1899 A, p. 59. (*Elotherium*.)

Roger, O. 1896 A, p. 204. (*Elotherium*.)

Trouessart, E. L. 1898 A, p. 808. (*Elotherium*.)

HYOTHERIINÆ.

Cope, E. D. 1894 E, p. 869. (*Leptochæridæ*.)

Marsh, O. C. 1894 L, p. 273. (*Leptochæridæ*.)

Roger, O. 1896 A, p. 204.

Trouessart, E. L. 1898 A, p. 810.

Zittel, K. A. 1893 B, p. 337.

HYOTHERIUM Meyer. Type *H. sömereringii* Meyer.

Meyer, H. 1834 A, p. 43.

Bronn, H. G. 1838 A, p. 1222, pl. xlv, fig. 7.

Cope and Wortman, 1884 A, p. 17.

Filhol, A. 1881 A.

1891 A, p. 207.

Gaudry, A. 1878 B, p. 70.

Gervais, P. 1859 A, p. 181.

Lydekker, R. 1884 C, p. 91.

1885 C, p. 253.

Meyer, H. 1841 A.

Peters, K. 1869 B.

Pictet, F. J. 1853 A, p. 333.

Stehlin, H. G. 1899 A, pp. 44, 135, 235, 313.

Wilckens, M. 1885 B, p. 337.

Woodward, A. S. 1898 B, p. 343.

Zittel, K. A. 1893 B, p. 341.

Hyotherium americanum Scott and Osb.

Scott and Osborn 1887 B, p. 155.

Cope, E. D. 1888 E, p. 66.

Matthew, W. D. 1899 A, p. 60. (*Bothrolabis*.)

Roger, O. 1896 A, p. 207. (*Bothrolabis*.)

Stehlin, H. G. 1899 A, p. 113.

Trouessart, E. L. 1898 A, p. 815. (*Bothrolabis*.)

Oligocene (White River); South Dakota?

Hyotherium platyops Cope.

Cope, E. D. 1881 C, p. 174.

Lydekker, R. 1884 C, p. 93.

Matthew, W. D. 1899 A, p. 60. [*Bothrolabis* (*Palæochærus*).]

Roger, O. 1896 A, p. 207. (*Bothrolabis*.)

Trouessart, E. L. 1898 A, p. 815. (*Bothrolabis*.)

Oligocene (White River); South Dakota.

PERCHÆRUS Leidy. Type *Palæochærus probus* Leidy.

- Leidy, J.* 1869 A, p. 194.
Cope, E. D. 1879 A, p. 44. (Thinohyus.)
 1879 E, p. 374. (Thinohyus.)
 1884 O, p. 37. (Thinohyus.)
 1887 B, p. 384. (Thinohyus.)
 1888 E, p. 62. (Thinohyus.)
 1894 E, p. 869. (Thinohyus.)
Cope and Wortman 1884 A, p. 17. (Thinohyus.)
Leidy, J. 1871 C, p. 353.
Marsh, O. C. 1875 B, p. 248. (Thinohyus type *T. lentus* Marsh.)
 1877 E. (Perchærus, Thinohyus.)
 1894 L, p. 271.
Nicholson and Lydekker 1889 A, p. 1322. (Perchærus, Thinohyus.)
Schlosser, M. 1886 B, p. 88.
Scott, W. B. 1892 A, p. 438. (Perchærus, Thinohyus.)
Stehlin, H. G. 1899 A, p. 112. (Perchærus); p. 113 (Thinohyus.)
Wilckens, M. 1885 B, p. 304.
Zittel, K. A. 1893 B, p. 342. (Perchærus, Thinohyus.)

Perchærus antiquus Marsh.

- Marsh, O. C.* 1893 D, p. 411, pl. x, fig. 1. [Perchærus (Dicotyles).]
 1870 I, p. 11. (Dicotyles antiquus; no description.)
 1894 L, p. 271, fig. 28. (Thinohyus.)
Matthew, W. D. 1899 A, p. 60. (Perchærus.)
Roger, O. 1896 A, p. 207. (Thinohyus.)
Stehlin, H. G. 1899 A, p. 114. (Thinohyus.)
Trouessart, E. L. 1898 A, p. 815 (Perchærus); p. 816 (Thinohyus.)
 Miocene; New Jersey.

Perchærus lentus (Marsh).

- Marsh, O. C.* 1875 B, p. 248 (Thinohyus.)
Cope, E. D. 1879 E, p. 375 (Thinohyus.)
King, C. 1871 A, p. 424. (Thinohyus.)
Marsh, O. C. 1894 L, p. 271, fig. 26. (Thinohyus.)
Matthew, W. D. 1899 A, p. 64. (Thinohyus.)
Roger, O. 1896 A, p. 207. (Thinohyus.)
Scott, W. B. 1892 A, p. 438, fig. 82. (Thinohyus.)

LEPTOCHÆRUS Leidy. Type *L. spectabilis* Leidy.

- Leidy, J.* 1856 I, p. 88.
Cope, E. D. 1894 E, p. 869.
Leidy, J. 1869 A, p. 197.
 1871 C, p. 354.
Nicholson and Lydekker 1889 A, p. 1323.
Schlosser, M. 1886 B, p. 85.
Scott, W. B. 1891 A, p. 46.
Zittel, K. A. 1893 B, p. 341.
Leptochærus gracilis Marsh.
Marsh, O. C. 1894 L, p. 272, figs. 29, 30.
Matthew, W. D. 1899 A, p. 60.
Roger, O. 1896 A, p. 206.
 Oligocene (White River); South Dakota.

- Stehlin, H. G.* 1899 A, p. 114 (Thinohyus); p. 193. (Thinohyus.)
Trouessart, E. L. 1898 A, p. 815. (Thinohyus.)
 Miocene (John Day); Oregon.

Perchœrus nanus (Marsh).

- Marsh, O. C.* 1894 L, p. 271, fig. 28. (Thinohyus.)
Matthew, W. D. 1899 A, p. 60. (Thinohyus.)
Roger, O. 1896 A, p. 207. (Thinohyus.)
Stehlin, H. G. 1899 A, p. 113 (Thinohyus); pp. 193, 273.
Trouessart, E. L. 1898 A, p. 816. (Thinohyus.)
 Oligocene (White River); South Dakota.

Perchœrus probus Leidy.

- Leidy, J.* 1856 J, p. 165. (Palæochærus.)
Hayden, F. V. 1858 B, p. 157. (Palæochærus.)
King, C. 1878 A, p. 411.
Leidy, J. 1869 A, pp. 194, 389, pl. xxi, figs. 20-27.
 1871 C, p. 353.
Matthew, W. D. 1899 A, p. 60.
Roger, O. 1896 A, p. 207.
Scott, W. B. 1892 A, p. 438, fig. 83.
Stehlin, H. G. 1899 A, pp. 112, 193.
Wilckens, M. 1885 B, p. 305.
 Oligocene (White River); South Dakota.

Perchœrus robustus (Marsh).

- Marsh, O. C.* 1894 F, p. 94. (Thinohyus.)
Matthew, W. D. 1899 A, p. 60. (Thinohyus.)
Stehlin, H. G. 1899 A, p. 114 (Thinohyus); p. 193
Trouessart, E. L. 1898 A, p. 816. (Thinohyus.)
 Oligocene (White River); South Dakota.

Perchœrus socialis (Marsh).

- Marsh, O. C.* 1875 B, p. 249. (Thinohyus.)
Cope, E. D. 1879 B, p. 58. (Palæochærus.)
King, C. 1878 A, p. 424. (Thinohyus.)
Marsh, O. C. 1894 L, p. 271, fig. 25. (Thinohyus.)
Matthew, W. D. 1899 A, p. 64. (Thinohyus.)
Stehlin, H. G. 1899 A, p. 113. (Thinohyus.)
Trouessart, E. L. 1898 A, p. 816. (Thinohyus.)
 Miocene (John Day); Oregon.

Leptochærus spectabilis Leidy.

- Leidy, J.* 1856 I, p. 88.
Hayden, F. V. 1858 B, p. 157.
King, C. 1878 A, p. 411.
Leidy, J. 1869 A, pp. 197, 389, pl. xxi, figs. 14-19.
 1871 C, p. 354.
Matthew, W. D. 1899 A, p. 59.
Roger, O. 1896 A, p. 206.
Trouessart, E. L. 1898 A, p. 814.
Wilckens, M. 1885 B, p. 305.
 Oligocene (White River); South Dakota.

NANOHYUS Leidy. Type *N. porcinus* Leidy.

Leidy, J. 1869 B, p. 65.
1869 A, p. 200.
1871 C, p. 354.

Scott, W. B. 1892 A, p. 441.
Stehlin, H. G. 1899 A, p. 221.

Nanohyus porcinus Leidy.

Leidy, J. 1869 B, p. 65.
1869 A, pp. 200, 389, pl. xxix, figs. 11, 12.

Leidy, J. 1871 C, p. 354.
Matthew, W. D. 1899 A, p. 60.
Roger, O. 1896 A, p. 207.
Stehlin, H. G. 1899 A, p. 113.
Trouessart, E. L. 1898 A, p. 815.
Wilckens, M. 1885 B, p. 306.
Oligocene (White River); South Dakota?

CHÆNOHYUS Cope. Type *C. decedens* Cope.

Cope, E. D. 1879 E, p. 373.
1887 B, p. 384.
1888 E, p. 63.
1888 X, p. 1088.

Cope and Wortman 1884 A, p. 17.
Flower and Lydekker 1895 A, p. 291.
Nicholson and Lydekker 1889 A, p. 1321.
Stehlin, H. G. 1899 A, pp. 113, 193.
Zittel, K. A. 1893 B, p. 342.

Chænohyus decedens Cope.

Cope, E. D. 1879 E, p. 373.
1888 E, p. 63.
Matthew, W. D. 1899 A, p. 64.
Roger, O. 1896 A, p. 207.
Stehlin, H. G. 1899 A, pp. 114, 193.
Trouessart, E. L. 1898 A, p. 815.
Miocene (John Day); Oregon.

BOTHROLABIS Cope. Type *B. rostratus* Cope.

Cope, E. D. 1888 E, pp. 63, 66.
1888 X, p. 1088.
Flower and Lydekker 1891 A, p. 291.
Stehlin, H. G. 1899 A, pp. 113, 193, 272, 320.
Steinmann and Döderlein 1890 A, p. 796.
Zittel, K. A. 1893 B, p. 342.

Bothrolabis pristinus (Leidy).

Leidy, J. 1873 B, pp. 216, 319, pl. vii, figs. 13, 14.
(Dicotyles.)

Cope, E. D. 1879 B, p. 58. (Palæochoærus.)
1888 E, pp. 66, 70.

Cope and Wortman, 1884 A, pp. 18, 19. (Dicotyles.)

Leidy, J. 1870 P, p. 112. ("Peccary.")
Matthew, W. D. 1899 A, p. 64.
Reinhardt, J. 1880 A, p. 30. (Dicotyles.)
Roger, O. 1896 A, p. 207.
Stehlin, H. G. 1899 A, pp. 114, 193, 273, 320.
Wilckens, M. 1885 B, p. 306. (Dycotyles.)
Miocene (John Day); Oregon.

Bothrolabis rostratus Cope.

Cope, E. D. 1888 E, pp. 66, 77.
Matthew, W. D. 1899 A, p. 64.

Roger, O. 1896 A, p. 207.
Stehlin, H. G. 1899 A, pp. 114, 193, 320.
Trouessart, E. L. 1898 A, p. 815.
Miocene (John Day); Oregon.

Bothrolabis subæquans Cope.

Cope, E. D. 1879 E, p. 374. (Palæochoærus.)
1888 E, pp. 66, 67.
Lydekker, R. 1884 C, p. 93. (Hyotherium)
Matthew, W. D. 1899 A, p. 64.
Roger, O. 1896 A, p. 207.
Stehlin, H. G. 1899 A, pp. 114, 193, 273, 320.
Trouessart, E. L. 1898 A, p. 815.
Miocene (John Day); Oregon.

Bothrolabis trichænus Cope.

Cope, E. D. 1879 E, p. 373. (Thinohyus.)
1879 B, p. 58. (Palæochoærus condoni.)
1888 E, pp. 66, 74.
Matthew, W. D. 1899 A, p. 64.
Roger, O. 1896 A, p. 207.
Stehlin, H. G. 1899 A, pp. 114, 193, 273, 320.
Trouessart, E. L. 1898 A, p. 815.
Miocene (John Day); Oregon.

TAYASSUINÆ.

The name hitherto employed for this subfamily has been *Dicotylinae*.

Branco, W. 1897 A, p. 23.

Cope, E. D. 1888 E.
1888 X, p. 1088.
1889 G, p. 134.

Cope and Wortman 1884 A, pp. 16, 17.

Flower and Lydekker 1891 A, p. 289. (Dicotylidæ.)

Gill, T. 1872 B, pp. 11, 83. (Dicotylidæ.)
Gray, J. E. 1868 A, p. 43. (Dicotylidæ.)
1869 A, p. 350. (Dicotylidæ.)
Leidy, J. 1853 G.
Roger, O. 1896 A, p. 207.
Trouessart, E. L. 1898 A, p. 816.
Zittel, K. A. 1893 B, p. 342.

TAYASSU Fischer. Type *Dicotyles torquatus* Cuv.

Fischer, G. 1814, Zoognosia, iii, pp. 284-289.

Unless otherwise indicated, the following authors use for this genus the name *Dicotyles*.

Ameghino, F. 1889 A, p. 573.

Baird, S. F. 1859 A, p. 627.

Burmeister, H. 1867 A, p. 236. ("Dicotyle Cuv.")

Cope, E. D. 1875 L, p. 21.

1887 B, p. 384.

1888 E, p. 62.

1888 X, p. 1088.

1889 G, p. 134. (Dicotyles; Mylohyus, type *D. nasutus*.)

1899 A, p. 259. (Mylohyus.)

Cope and Wortman 1884 A, p. 17.

Cuvier, G., 1817, Règne Anim, i, p. 237.

Flower, W. H. 1873 A.

Flower and Lydekker 1891 A, p. 289.

Gervais and Ameghino 1880 A, p. 111. ("Dicotyle.")

Gray, J. E. 1868 A, p. 45.

1869 A, p. 351.

Holmes, F. S. 1858 B.

Klippart, J. H. 1875 A.

Leidy, J. 1853 G.

1857 J.

1871 C, p. 352.

Lydekker, R. 1885 C, p. 250.

Nicholson and Lydekker 1889 A, p. 1322.

Owen, R. 1845 B, p. 559.

1848 A, p. 123.

1866 B, p. 458.

Palmer, T. S. 1899 A, p. 494. (Tayassu.)

Paulli, S. 1900 A, p. 198.

Reinhardt, J. 1880 A.

Rütimeyer, L. 1862 A, pp. 578, 584.

Schlosser, M. 1885 A, p. 685.

1886 A, p. 255.

1886 B, p. 89.

Scott, W. B. 1890 B.

1891 A, p. 48, *et seq.*

1892 A, p. 438.

Scott and Osborn 1890 B, p. 76.

Stehlin, H. G. 1899 A, pp. 111, 186, 208, 270, 318, 332.

Steinmann and Döderlein 1890 A, p. 796.

Trouessart, E. L. 1898 A, p. 817.

Turner, H. N. 1848 A, p. 70.

Wilckens, M. 1885 B, pp. 217, 307.

Woodward, A. S. 1898 B, p. 346.

Zittel, K. A. 1893 B, p. 342.

Tayassu hesperius (Marsh.)

Marsh, O. C. 1871 D, p. 42. (Dicotyles.)

Cope, E. D. 1879 E, p. 373. (Chænohyus?)

Cope and Wortman 1884 A, p. 18. (Dicotyles.)

King, C. 1878 A, p. 443. (Dicotyles.)

Stehlin, H. G. 1899 A, pp. 115, 194. (Dicotyles.)

Trouessart, E. L. 1898 A, p. 815. (Bothrolabis subæquans.)

Wilckens, M. 1885 B, p. 306. (Dicotyles.)

Pliocene; Oregon.

Tayassu nasutus (Leidy.)

Leidy, J. 1868 I, p. 230. (Dicotyles.)

Conrad, T. A. 1869 A, p. 363. (Dicotyles.)

Cope, E. D. 1869 E, p. 176. (Dicotyles.)

1869 N, p. 741. (Dicotyles.)

1888 X, p. 1089. (Dicotyles.)

1889 G, p. 134. (Dicotyles, Mylohyus.)

1899 A, p. 263. (Mylohyus.)

Cope and Wortman 1884 A, p. 18. (Dicotyles.)

Kindle, E. M. 1898 A, p. 485. (Dicotyles.)

Leidy, J. 1860 C. ("Pecary.")

1869 A, pp. 385, 445, pl. xxviii, figs. 1, 2. (Dicotyles.)

1871 C, p. 352. (Dicotyles.)

Reinhardt, J. 1880 A, p. 29. (Dicotyles.)

Roger, O. 1896 A, p. 208. (Dicotyles.)

Stehlin, H. G. 1899 A, pp. 115, 190, 273, 319. (Dicotyles.)

Trouessart, E. L. 1898 A, p. 817. (Dicotyles.)

Pleistocene; Indiana, New Jersey.

Tayassu pennsylvanicus (Leidy.)

Leidy, J. 1859 H, p. 8, pl. ii, figs. 3-6. (Dicotyles.)

Cope, E. D. 1899 A, pp. 259, 262. (Mylohyus.)

Leidy, J. 1880 A, p. 347. (Dicotyles nasutus.)

Mercer, H. C. 1894 A, p. 98. (Dicotyles.)

Pleistocene; Pennsylvania.

Tayassu serus (Cope.)

Cope, E. D. 1878 C, p. 224. (Dicotyles.)

1889 G, p. 134. (Dicotyles.)

Cope and Wortman 1884 A, p. 19. (Dicotyles.)

Matthew, W. D. 1899 A, p. 72. (Dicotyles.)

Reinhardt, J. 1880 A, p. 28. (Dicotyles.)

Roger, O. 1896 A, p. 208. (Dicotyles.)

Stehlin, H. G. 1899 A, pp. 115, 189, 319. (Dicotyles.)

Trouessart, E. L. 1898 A, p. 817. (Dicotyles.)

Miocene (Loup Fork); Kansas.

Tayassu tajacu (Linn.).

Linnaeus, C., 1758, Syst. Nat., ed. 10, i, p. 50. (Sus.)

Ameghino, F. 1889 A, p. 574. (Dicotyles.)

Baird, S. F. 1857 A, p. 627, pl. lxxxvii. (Dicotyles.)

Blainville, H. M. D. 1864 A, iv, AA, p. 138, pls. ii, iii, v-viii. (Sus torquatus.)

Cope, E. D. 1867 C, p. 151 (Cynorea proterva, in part); p. 155 (Dicotyles torquatus.)

1868 I, p. 185. ("Dicotyles.")

1889 G, p. 134. (Dicotyles tajassu.)

Cope and Wortman 1884 A, pp. 18, 19. (Dicotyles torquatus.)

Flower and Lydekker 1891 A, p. 290, fig. 109. (Dicotyles.)

Kindle, E. M. 1898 A, p. 485. (Dicotyles torquatus.)

Le Conte, J. L. 1848 A, p. 104. (Dicotyles torquatus.)

Leidy, J. 1860 B, p. 108, pl. xvii, figs. 13, 14. (Dicotyles fossilis.)

1869 A, p. 384. (Dicotyles lenis.)

1871 C, p. 352. (Dicotyles lenis.)

Lydekker, R. 1885 C, p. 252. (Dicotyles.)

- Marsh, O. C. 1885 B, p. 293, fig. 112. (Dicotyles torquatus.)
 Reinhardt, J. 1880 A. (Dicotyles torquatus, D. lenis.)
 Roger, O. 1896 A, p. 208. (D. torquatus.)
 Scott, W. B. 1890 B, p. 385. (Dicotyles torquatus.)
 Stehlin, H. G. 1899 A, pp. 111, 187, 208, 318, 334. (Dicotyles torquatus.)
 Trouessart, E. L. 1898 A, p. 817. (Dicotyles.)
 Wyman, J. 1862 A, p. 422. (Dicotyles.)
 Zittel, K. A. 1893 B, p. 342, fig. 280. (D. torquatus.)
 Living: South America, Central America, North America to Arkansas: Pleistocene; South Carolina, Maryland, Virginia, Wisconsin, Illinois, Iowa, Kentucky.

Tayassu tetragonus (Cope).

- Cope, E. D. 1899 A, pp. 259, 260, pl. xxi, figs. 3-3b. (Mylohyus.)
 Pleistocene; Pennsylvania.

Tayassu sp. indet.

- Leidy, J. 1869 A, p. 387. p. xxviii, fig. tyles.)
 Pliocene?; Niobrara River.

Tayassu sp. indet.

- Scott, W. B. in Scott and Osborn 1890 B, p. 76, fig. 6. (Dicotyles.)
 Stehlin, H. G. 1899 A, pp. 20, 115, 195. (Dicotyles.)
 Williston, S. W. 1894 C, p. 24. (Platygonus.)
 Miocene (Loup Fork); Nebraska?

PLATYGNUS Le Conte. Type *P. compressus* Le Conte.

- Le Conte, J. L. 1848 A, p. 103. (Platignus.)
 Cope, E. D. 1887 B, p. 384.
 1889 G, p. 134.
 Le Conte, J. L. 1848 A, p. 104 (Hyops, type *H. depressifrons*); p. 105 (Protochærus, type *P. prismaticus*=*Platygonus compressus*).
 1848 B, p. 237.
 Leidy, J. 1853 G. (Platygonus; Euchærus, type *E. macrops*=*P. compressus*).
 1869 A, p. 353.
 1871 C, p. 353.
 1889 G, p. 41.
 Marsh, O. C. 1877 E.
 Nicholson and Lydekker 1889 A, p. 1322.
 Pictet, F. J. 1853 A, p. 303 (Platygonus); p. 326 (Hyops).
 Reinhardt, J. 1880 A, p. 29.
 Schlosser, M. 1886 B, p. 89.
 Stehlin, H. G. 1899 A, pp. 116, 190, 210, 319.
 Steinmann and Döderlein 1890 A, p. 796.
 Wilckens, M. 1885 B, p. 270 (Hyops); p. 304 (Platygonus).
 Williston, S. W. 1894 C.
 Zittel, K. A. 1893 B, p. 342.

Platygonus bicalcaratus Cope.

- Cope, E. D. 1893 A, p. 68, fig. 5.
 Matthew, W. D. 1899 A, p. 75.
 Stehlin, H. G. 1899 A, p. 117.
 Trouessart, E. L. 1898 A, p. 816.
 Williston, S. W. 1894 C, p. 24.
 Pliocene (Blanco); Texas.

Platygonus compressus Le Conte.

- Le Conte, J. L. 1848 A, p. 103, figs. 1, 2.
 Cope, E. D. 1869 E, p. 176. (Dicotyles.)
 1884 G, p. 15.
 1888 X, p. 1092, fig. 6.
 1889 F.
 Cope and Wortman, 1884 A, p. 20.
 Harlan, R. 1825 A, p. 222. ("Extinct pecari.")
 Kindle, E. M. 1898 A, p. 485.
 Klippart, J. H. 1875 A. (Dicotyles.)
 L. P. B. 1885 A, p. 193, fig. 28.
 Le Conte, J. L. 1848 A, p. 104 (Hyops depressifrons); p. 105 (Protochærus prismaticus).
 1848 B, pls. i-iv.

- Le Conte, J. L. 1852 A, p. 3 (Dicotyles depressifrons); p. 5 (Protochærus prismaticus).
 1852 B. (Dicotyles costatus.)
 1852 D. (Hyops depressifrons, *P. compressus*.)
 Leidy, J. 1853 G, p. 323, pl. xxxvii, figs. 12-16; pl. xxviii, figs. 2, 3 (*P. compressus*); p. 342, pl. xxxviii, fig. 1 (Dicotyles depressifrons); p. 342, pl. xxxvii, fig. 18 (Protochærus prismaticus); p. 342. (Dicotyles costatus); p. 340, pl. xxxvi, figs. 1, 2; pl. xxxvii, figs. 5-8 (*Euchærus macrops*).
 1856 R. (Dicotyles.)
 1857 J, pl. vi, figs. 2-7. (Dicotyles.)
 1862 A. (Dicotyles.)
 1868 I, p. 231. (Dicotyles.)
 1869 A, pp. 200, 383.
 1870 H, p. 13.
 1871 C, p. 353.
 1889 G, p. 41, pl. viii, fig. 1.
 1889 H, p. 12.

- Marsh, O. C. 1884 F, fig. 761
 1885 B, fig. 109.

- Miller, G. S. 1899 B, p. 372.
 Newberry, J. S. 1874 F, p. 77. (Dicotyles.)
 1875 A, p. vi. (Dicotyles.)
 Pictet, F. J. 1853 A, p. 303 (*P. compressus*); p. 335 (Protochærus prismaticus).
 Reinhardt, J. 1880 A, p. 29. (Dicotyles.)
 Roger, O. 1896 A, p. 208.
 Stehlin, H. G. 1899 A, pp. 117, 190, 273.
 Trouessart, E. L. 1898 A, p. 817.
 Williston, S. W. 1894 C, p. 24.
 1897 I, p. 303.
 1898 I, p. 92.

- Wyman, J. 1862 A, p. 422. ("Dicotyles.")
 Pleistocene; Illinois, Indiana, Kentucky, Ohio, New York, Missouri, Iowa, Kansas.

Platygonus condoni Marsh.

- Marsh, O. C. 1871 D, p. 41.
 Cope, E. D. 1886 B, p. 359.
 1886 H.
 Cope and Wortman 1884 A, pp. 18, 19. (Dicotyles.)
 King, C. 1878 A, p. 443.
 Reinhardt, J. 1880 A, p. 30.
 Roger, O. 1896 A, p. 208.
 Stehlin, H. G. 1899 A, p. 118.

¹ This, the original spelling of this generic name, was probably due to a printer's error.

Trouessart, E. L. 1898 A, p. 816.
 Wilckens, M. 1885 B, p. 306.
 Williston, S. W. 1894 C, p. 24.
 Pliocene; Oregon.

Platygonus leptorhinus Willist.

Williston, S. W. 1894 F.
 Stehlin, H. G. 1899 A, pp. 117, 191, 273, 333.
 Trouessart, E. L. 1898 A, p. 816.
 Williston, S. W. 1894 C, p. 27, pls. vii, viii; text
 figs. 1-6.
 Pliocene; Kansas.

Platygonus rex Marsh.

Marsh, O. C. 1894 L, p. 273, figs. 31, 32.
 Roger, O. 1896 A, p. 208.
 Stehlin, H. G. 1899 A, pp. 21, 115. (Dicotyles.)
 Trouessart, E. L. 1898 A, p. 816.
 Pliocene; Oregon.

Platygonus striatus Marsh.

Marsh, O. C. 1871 D, p. 41.
 King, C. 1878 A, p. 430.
 Matthew, W. D. 1899 A, p. 72.
 Roger, O. 1896 A, p. 208.
 Stehlin, H. G. 1899 A, p. 118.
 Trouessart, E. L. 1898 A, p. 816.
 Williston, S. W. 1894 C, p. 24.
 Miocene (Loup Fork); Nebraska.

THINOTHERIUM Cope. Type *T. annulatum* Cope. Not *Thinotherium* Marsh, 1872.

Cope, E. D. 1870 F, p. 292.

A genus of which little is known. Regarded
 at the time of description as belonging to the
 Hippopotamidæ.

Platygonus vetus Leidy.

Leidy, J. 1882 A, p. 301.
 Cope, E. D. 1888 X, p. 1089.
 Cope and Wortman 1884 A.
 Dugès, A. 1891 A, p. 16, pls. i, ii. (*P. alemanii*.)
 Leidy, J. 1889 G, p. 49.
 1889 H, p. 12, pl. ii, figs. 1, 2.
 Lesley, J. P. 1889 A, p. 690, figure.
 Mercer, H. C. 1894 A, p. 98. (*Dicotyles pennsylv-
 vanicus*.)
 Roger, O. 1896 A, p. 208.
 Stehlin, H. G. 1899 A, p. 117.
 Trouessart, E. L. 1898 A, p. 816.
 Williston, S. W. 1894 C.
 Pleistocene; Pennsylvania.

Platygonus ziegleri Marsh.

Marsh, O. C. 1871 D, p. 40.
 Cope and Wortman 1884 A, p. 21.
 Leidy, J. 1872 B, p. 365.
 Matthew, W. D. 1899 A, p. 48.
 Roger, O. 1896 A, p. 207.
 Stehlin, H. G. 1899 A, pp. 20, 118, 191.
 Trouessart, E. L. 1898 A, p. 816.
 Williston, S. W. 1894 C, p. 24.
 Eocene (Bridger); Wyoming.
 The generic position of this species is doubtful.

Thinotherium annulatum Cope.

Cope, E. D. 1870 F, p. 292.
 Roger, O. 1896 A, p. 207.
 Miocene?; Virginia.

SUINÆ.

Roger, O. 1896 A, p. 209.

| Zittel, K. A. 1893 B, p. 343.

Sus Linn. Type *S. scrofa* Linn.

Linnaeus, C., 1758, Syst. Nat., ed. 10, i, p. 49.
 Blainville, H. M. D. 1864 A, iv, AA, pls. i-ix.
 Flower and Lydekker 1891 A, p. 281.
 Hensel, R. 1875 A.
 Huxley, T. H. 1872 A, p. 313.
 Owen, R. 1845 B, p. 544.
 1866 B, p. 458.
 1868 A, p. 344, fig. 273.
 Parker, W. K. 1874 B, pls. xxviii-xxxvii.
 Paulli, S. 1900 A, p. 193.
 Pomel, A. 1848 A.
 Roger, O. 1896 A, p. 209.
 Rüttimeyer, L. 1862 B.
 1867, Verh. naturf. Gesellsch. Basel, iv, pp.
 139-176.
 Stehlin, H. G. 1899 A.
 Trouessart, E. L. 1898 A, p. 820.
 Woodward, A. S. 1898 B, 345.
 Zittel, K. A. 1893 B, p. 344.

Sus scrofa Linn.

Linnaeus, C., 1758, Syst. Nat., ed. 10, i, p. 49.
 Agassiz, L. in Holmes, F. S. 1858 A ("Hog.")
 Blainville, H. M. D. 1864 A, iv, AA, p. 113, pls. ii,
 iii, vi-viii.

| Cope, E. D. 1870 E, p. 284. (*Sus vagrans*.)
 1873 E (*S. vagrans*.)
 1873 F, p. 291. (*Sus vagrans*.)
 1873 L, p. 207. (*S. scrofa*.)
 Emmons, E. 1858 B, p. 198, fig. 22.
 Holmes, F. S. 1850 B, p. 203. ("Hog.")
 1858 A ("Hog.")
 Leidy, J. 1860 B, p. 109, pl. xix, figs. 4, 5.
 1869 A, p. 443.
 1873 E.
 Owen, R. 1866 B, pp. 458, 467, figs. 313-315.
 Paulli, S. 1900 A, p. 193, figs. 7, 8.
 Rafinesque, C. S., 1831, Enum. some remark, nat.
 objects. (Aper pecari.)
 Roger, O. 1896 A, p. 210.
 Rüttimeyer, L. 1862 B, p. 26.
 Stehlin, H. G. 1899 A.
 Trouessart, E. L. 1898 A, p. 821.

This species has been reported from various
 parts of the United States, North Carolina, South
 Carolina, New Jersey, Nebraska, and from de-
 posits ranging from the Miocene to the present;
 but it is most probable that all the remains
 have been derived from the introduced race.

Superfamily CAMELOIDEA Gill.

Gill, T. 1872 B, p. 76.

Following the suggestions of Dr. W. B. Scott, this group is made to include the Agriochæridæ and their allies. Unless otherwise indicated, the following authorities use for this group, in the restricted sense, the name Tylopoda.

Burmeister, H. 1867 A, p. 233.

Cope, E. D. 1898 B, p. 132.

Flower, W. H. 1874 A.

1885 A.

Flower and Lydekker 1891 A, p. 295.

Rütimeyer, L. 1867 B. (Camelina.)

Schlosser, M. 1886 A, p. 255.

Scott, W. B. 1890 B, p. 387.

1891 A.

1891 C, p. 63.

1892 C, p. 15.

1898 C, p. 75.

1899 A, p. 111.

Slade, D. D. 1893 A.

Woodward, A. S. 1898 B, p. 358.

Wortman, J. L. 1898 A, p. 94.

AGRIOCHÆRIDÆ.

Unless otherwise indicated, the following authors use the family name Oreodontidæ.

Ameghino, F. 1889 A, p. 576.

Bettany, G. T. 1873 A.

1876 A.

Cope, E. D. 1874 B, p. 463.

1884 H, p. 26.

1884 M.

1884 T.

1884 DD.

1885 B, p. 487.

1887 B, pp. 379, 386.

1887 N.

1888 X, pp. 1080, 1092.

1889 C, p. 171, *et seq.*

Flower and Lydekker 1891 A, p. 293. (Cotylo-

pidæ.)

Gill, T. 1872 B, pp. 10, 81.

Leidy, J. 1869 A, pp. 71, 379 (Oreodontidæ); p. 131

(Agriochæridæ).

1871 C, p. 348. (Agriochæridæ); p. 348 (Agrio-

chæridæ).

1873 B, p. 318.

Major, Fors. 1873 A, p. 104.

Marsh, O. C. 1877 E.

Nicholson and Lydekker 1889 A, p. 1326. (Coty-

lo-

pidæ.)

Osborn and Wortman 1894 A, p. 215.

Roger, O. 1896 A, p. 212.

Schlosser, M. 1886 A, p. 255.

1886 B, p. 46.

1888 A.

1890 C.

Scott, W. B. 1885 B.

1889 C.

1890 A, p. 490.

1890 B.

1891 A, p. 71.

1892 A, p. 433.

1895 C, p. 164.

1898 C, p. 74.

1899 A, p. 85.

Steinmann and Döderlein 1890 A, p. 799.

Trouessart, E. L. 1898 A, p. 835.

Woodward, A. S. 1898 B, p. 354.

Zittel, K. A. 1893 B, pp. 348, 356.

AGRIOCHÆRINÆ.

Cope, E. D. 1884 M, p. 571.

Flower and Lydekker 1891 A, p. 293.

Leidy, J. 1869 A, p. 131. (Agriochæridæ.)

1871 C, p. 348. (Agriochæridæ.)

Lydekker, R. 1896 B, p. 375. (Agriochæridæ.)

Major, Fors. 1873 A, p. 104. (Agriochæridæ.)

Osborn, H. F. 1893 F, p. 132. (Artionychia.)

1893 J, p. 611. (Artionychia.)

Osborn and Wortman 1893 A, p. 4. (Artionychia.)

Roger, O. 1896 A, p. 212.

Scott, W. B. 1889 C, p. 75.

1890 B, pp. 320, 358.

1892 A, p. 434.

1899 A, p. 101. (Agriochæridæ.)

Trouessart, E. L. 1898 A, p. 833.

Zittel, K. A. 1893 B, p. 351.

PROTAGRIOCHÆRUS Scott. Type *P. annectens* Scott.

Scott, W. B. 1899 A, p. 100.

Protagriochærus annectens Scott.

Scott, W. B. 1899 A, p. 100, pl. iv, figs. 26-28.

Eocene (Uinta); Utah.

AGRIOCHÆRUS Leidy. Type *A. antiquus* Leidy.

Leidy, J. 1850 C, p. 121.

Cope, E. D. 1879 E, p. 375. (Coloreodon, type *C. ferox*.)

1879 K, p. 197. (Merycopater, type *Hyopotamus guyotianus*.)

1884 M, pp. 504, 559 (Agriochærus); pp. 504, 570 (Coloreodon).

1887 B, p. 388 (Coloreodon); p. 398 (Agriochærus).

Cope, E. D. 1888 X, p. 1094.

1889 C, p. 48.

1889 G, p. 119.

1894 E, p. 869. (Coloreodon.)

Leidy, J. 1852 L, p. 64.

1854 A, pp. 24, 113.

1869 A, p. 132.

1871 C, p. 349.

1873 B, p. 216.

Marsh, O. C. 1894 L, p. 270. (*Agriomeryx*, type *A. migrans*.)

Nicholson and Lydekker 1889 A, p. 1327. (*Agriochærus*, *Coloreodon*.)

Osborn, H. F. 1893 D, p. 44. (*Agriochærus*, *Artionyx*.)

1893 E. (*Artionyx*.)

1893 F. (*Artionyx*.)

1893 J, p. 611. (*Artionyx*.)

1893 K. (*Artionyx*.)

1898 A, p. 146.

Osborn and Wortman 1893 A, p. 5. (*Artionyx*, type *A. gaudryi*.)

Schlosser, M. 1885 A, p. 685.

1886 B, p. 47.

Scott, W. B. 1889 C, p. 75.

1890 A.

1890 B, p. 358 (*Agriochærus*); p. 361 (*Coloreodon*).

1891 A, p. 48.

1891 D, p. 90.

1892 A, p. 434.

1894 B.

1894 D.

1894 E.

1899 A, p. 88, 108.

Steinmann and Döderlein 1890 A, p. 799.

Trouessart, E. L. 1898 A, p. 834.

Woodward, A. S. 1898 B, p. 356.

Wortman, J. L. 1893 A. (*Artionyx*.)

1895 A, p. 145.

Zittel, K. A. 1893 B, p. 352. (*Agriochærus*, *Coloreodon*.)

***Agriochærus antiquus* Leidy.**

Leidy, J. 1850 C, p. 122.

Cope, E. D. 1879 E, p. 375. (*Merycopater*.)

1884 M, p. 560.

Hayden, F. V. 1858 B, p. 157.

King, C. 1878 A, p. 411.

Leidy, J. 1852 J, p. 571.

1852 L, p. 65.

1853 D, p. 392.

1854 A, p. 24, pl. i, figs. 5-10.

1854 E, p. 157.

1869 A, pp. 132, 381, pl. xiii, fig. 4.

1870 P, p. 112.

1871 C, p. 349.

1873 B, pp. 216, 319.

Matthew, W. D. 1899 A, p. 60.

Roger, O. 1896 A, p. 212.

Trouessart, E. L. 1898 A, p. 833.

Wortman, J. L. 1895 A, p. 145, pl. i; text figs. 8-15, 17 (*A. latifrons*, not of *Leidy*); p. 177 (*A. antiquus*).

Oligocene (White River); South Dakota.

***Agriochærus auritus* Leidy.**

Leidy, J. 1852 J, p. 563, pl. xv, figs. 1, 2. (*Eucrotaphus*.)

Cope, E. D. 1884 M, p. 560. (*Eucrotaphus*.)

Leidy, J. 1854 A, pp. 56, 113, pl. vii, figs. 1-3. (*Eucrotaphus*.)

1869 A, p. 381. (Syn? of *A. major*.)

Trouessart, E. L. 1898 A, p. 834. (Syn? of *A. major*.)

Oligocene (White River); South Dakota.

If this species and *A. major* are identical, *A. auritus* will stand as the correct name.

***Agriochærus ferox* (Cope.)**

Cope, E. D. 1879 E, p. 375. (*Coloreodon*.)

1884 M, pp. 505, 570, figure. (*Coloreodon*.)

1884 T, p. 282. (*Coloreodon*.)

Matthew, W. D. 1899 A, p. 64. (*Agriochærus*.)

Roger, O. 1896 A, p. 213. (*Coloreodon*.)

Scott, W. B. 1890 B, pl. xiv, fig. 13; pl. xv, fig. 22. (*Coloreodon*.)

Trouessart, E. L. 1898 A, p. 834. [*Agriochærus* (*Coloreodon*.)]

Wortman, J. L. 1895 A, p. 178. (*Agriochærus*.)

Miocene (John Day); Oregon.

***Agriochærus gaudryi* (Osborn and Wortman).**

Osborn and Wortman 1893 A, p. 5, figs. 1, 3, 4, 5 B. (*Artionyx*.)

Ameghino, F. 1894 A, p. 319. (*Artionyx*.)

Osborn, H. F. 1893 F, p. 131, fig. 4. (*Artionyx*.)

Roger, O. 1896 A, p. 212.

Scott, W. B. 1894 B.

Trouessart, E. L. 1898 A, p. 834. [*Agriochærus* (*Coloreodon*.)]

Wortman, J. L. 1895 A, p. 170, figs. 1, 19, 20 (*Agriochærus major*); p. 178 (*Agriochærus gaudryi*?).

Oligocene (White River); South Dakota.

***Agriochærus guyotianus* Cope.**

Cope, E. D. 1879 D, p. 77. (*Hyopotamus*.)

1879 B, p. 58. (*Merycopater*.)

1879 E, p. 375. (*Merycopater guyotianus*.)

1879 K, p. 197. (*Merycopater*.)

1884 M, pp. 560, 563.

1884 T, p. 281.

1889 G, pl. iii.

Lydekker, R. 1883 A, p. 157. (*Merycopater*.)

Roger, O. 1896 A, p. 212.

Scott, W. B. 1890 B, pl. xiv, figs. 11, 12.

Trouessart, E. L. 1898 A, p. 834.

Wortman, J. L. 1895 A, figs. 2-7, 16-18.

Miocene (John Day); Oregon.

***Agriochærus latifrons* Leidy.**

Leidy, J. 1869 A, pp. 135, 381, pl. xiii, figs. 1-3.

Cope, E. D. 1884 M, p. 560.

1884 T, p. 281.

Leidy, J. 1867 D, p. 32.

1871 C, p. 349.

1873 B, pp. 216, 319.

Lydekker, R. 1896 B, p. 374, fig. 78.

Marsh, O. C. 1875 B, p. 250.

Matthew, W. D. 1899 A, p. 60.

Roger, O. 1896 A, p. 212.

Scott, W. B. 1890 B, text figs. vii, x².

1891 A, p. 49.

Trouessart, E. L. 1898 A, p. 834.

Woodward, A. S. 1898 B, p. 357, fig. 204.

Wortman, J. L. 1895 A, p. 177 (in part, not figs. 8-15, 17).

Zittel, K. A. 1893 B, p. 352, fig. 287.

Oligocene (White River); South Dakota.

***Agriochærus macrocephalus* (Cope.)**

Cope, E. D. 1879 E, p. 376. (*Coloreodon*.)

1884 M, p. 570. (*Coloreodon*.)

1884 T, p. 281. (*Coloreodon*.)

Matthew, W. D. 1899 A, p. 64.

Roger, O. 1896 A, p. 213. (*Coloreodon*.)

- Trouessart, E. L. 1898 A, p. 835. [Agriochærus (Coloreodon).]
 Wortman, J. L. 1895 A, p. 178.
 Miocene (John Day); Oregon.

Agriochærus major Leidy.

- Leidy, J. 1856 J, p. 164.
 Cope, E. D. 1884 M, p. 560.
 1884 T, p. 281.
 Hayden, F. V. 1858 B, p. 157.
 Leidy, J. 1869 A, pp. 134, 381.
 1871 C, p. 349.
 Matthew, W. D. 1899 A, p. 60.
 Roger, O. 1896 A, p. 212.
 Trouessart, E. L. 1898 A, p. 834.
 Wortman, J. L. 1895 A, p. 178.
 Oligocene (White River); South Dakota.
 It is not unlikely that this species is identical with *A. auritus* Leidy. If this view is accepted, the name *auritus* will supersede *major*.

Agriochærus migrans (Marsh).

- Marsh, O. C. 1894 L, p. 270, fig. 24. (Agriomeryx.)

- Matthew, W. D. 1899 A, p. 60. (Agriochærus.)
 Trouessart, E. L. 1898, A, p. 834. [Agriochærus (Coloreodon).]
 Oligocene (White River); South Dakota.

Agriochærus ryderanus Cope.

- Cope, E. D. 1881 C, p. 173. (Coloreodon.)
 1884 M, pp. 560, 566.
 1884 T, p. 281.
 Roger, O. 1896 A, p. 212.
 Trouessart, E. L. 1898 A, p. 834.
 Wortman, J. L. 1895 A, p. 178.
 Miocene (John Day); Oregon.

Agriochærus trifrons Cope.

- Cope, E. D. 1884 M, pp. 560, 561.
 1884 T, p. 281.
 Matthew, W. D. 1899 A, p. 64.
 Roger, O. 1896 A, p. 212.
 Trouessart, E. L. 1898 A, p. 834.
 Wortman, J. L. 1895 A, p. 177.
 Miocene (John Day); Oregon.

PROTOREODONTINE.

- Scott, W. B. 1890 A, p. 503.
 Flower and Lydekker 1891 A, p. 293.
 Marsh, O. C. 1894 L, p. 267. (Eomeriidae.)
 Roger, O. 1896 A, p. 212.

- Scott, W. B. 1890 B, pp. 320, 361.
 1899 A, p. 85. (Oreodontidae, in part.)
 Zittel, K. A. 1893 B, p. 351.

PROTOREODON Scott and Osb. Type *P. parvus* Scott and Osb.

- Scott and Osborn 1887 A, p. 257.
 Berg, C., 1899, Commun. Mus. Nac. Buenos Aires, i, p. 79. (Chorotherium, to replace Agriotherium, preoccupied.)
 Cope, E. D. 1888 X, p. 1082.
 1890 C, p. 471.
 Flower and Lydekker 1891 A, p. 293.
 Marsh, O. C. 1894 L, p. 268. (Syn. of Eomeryx.)
 Nicholson and Lydekker 1889 A, p. 1328.
 Pavlow, M. 1900 A, pp. 34, 44.
 Scott, W. B. 1889 C, p. 75.
 1890 A, p. 487, pl. vii, figs. 1-8.
 1890 B, p. 361, pl. xiii, figs. 1-3; pl. xvi, figs. 23-26.
 1892 A, p. 433.
 1894 E.
 1898 C, p. 79. (Agriotherium, type *A. paradoxicum*.)
 1899 A, p. 85.
 Wortman, J. L. 1898 A, p. 96.
 Zittel, K. A. 1893 B, p. 351.

Protoreodon minor Scott.

- Scott, W. B. 1899 A, p. 95, pl. iii, fig. 23.
 Eocene (Uinta); Utah.

Protoreodon paradoxicus Scott.

- Scott, W. B. 1898 C, p. 79. (Agriotherium.)

- Matthew, W. D. 1899 A, p. 50. (Agriotherium.)
 Scott, W. B. 1899 A, pp. 86, 95, pl. iv, figs. 24, 25.
 (Protoreodon.)
 Eocene (Uinta); Utah.

Protoreodon parvus Scott and Osb.

- Scott and Osborn 1887 A, p. 257, figure.
 Cope, E. D. 1890 C, p. 470.
 Marsh, O. C. 1894 L, p. 268. (Syn. of Eomeryx *pumilis*.)
 Matthew, W. D. 1899 A, p. 50. (Eomeryx.)
 Pavlow, M. 1900 A, p. 34.
 Roger, O. 1896 A, p. 212.
 Scott, W. B. 1890 A, p. 487, pl. vii, figs. 1-8.
 1890 B, pl. xiii, figs. 1-3; pl. xvi, figs. 23-26.
 1899 A, pp. 89, 95, pl. iii, figs. 19-21.
 Trouessart, E. L. 1898 A, p. 833.
 Wortman, J. L. 1898 A, p. 96.
 Zittel, K. A. 1893 B, p. 351, fig. 286.
 Eocene (Uinta); Utah.

Protoreodon sp. indet.

- Scott, W. B. 1899 A, p. 95, pl. iii, fig. 22.
 Eocene (Uinta); Utah.

EOMERYX Marsh. Type *E. pumilis* Marsh.

- Marsh, O. C. 1894 L, p. 266.
 Cope, E. D. 1894 E, p. 869. (Syn. of Protoreodon.)
 Marsh, O. C. 1877 E. (Inadequate description; no species.)

- Pavlow, M. 1900 A, p. 34.
 Scott, W. B. 1890 A, p. 488.
 1899 A, pp. 85, 86. (Syn. of Protoreodon.)
 Scott and Osborn 1887 A, p. 259.

- Wortman, J. L. 1898 A, p. 96.
 Zittel, K. A. 1893 B, p. 351. (Syn.? of *Protoreodon*.)

Eomeryx pumilis Marsh.

- Marsh, O. C. 1875 B, p. 250. (*Agriochærus*.)
 Cope, E. D. 1884 M, p. 560. (*Agriochærus*.)
 King, C. 1878 A, p. 407. (*Agriochærus*.)
 Marsh, O. C. 1894 L, p. 266, figs. 18-22.

- Matthew, W. D. 1899 A, p. 50.
 Pavlov, M. 1900 A, p. 34.
 Scott, W. B. 1890 A, p. 487. (*Agriochærus*.)
 1899 A, pp. 86, 95. (*Protoreodon*.)
 Scott and Osborn 1887 A, p. 258. (*Protoreodon*?)
 Trouessart, E. L. 1898 A, p. 833. (Syn. of *Protoreodon parvus*.)
 Wortman, J. L. 1898 A, p. 96.
 Eocene (Uinta); Utah.

HYOMERYX Marsh. Type *H. breviceps* Marsh.

- Marsh, O. C. 1894 L, p. 145.
 Scott, W. B. 1898 C, p. 81.
 1899 A, pp. 95, 99.
 Wortman, J. L. 1895 A, p. 97.

Hyomeryx breviceps Marsh.

- Marsh, O. C. 1894 L, p. 268, fig. 19.

- Matthew, W. D. 1899 A, p. 50.
 Roger, O. 1896 A, p. 212.
 Trouessart, E. L. 1898 A, p. 833.
 Wortman, J. L. 1895 A, p. 145.
 Eocene (Uinta); Utah.

MERYCROIDODONTINÆ.

- Branco, W. 1897 A, p. 24. (*Oreodontinæ*.)
 Cope, E. D. 1884 M, p. 571. (*Oreodontinæ*.)
 Flower and Lydekker 1891 A, p. 293. (*Cotylopinæ*.)
 Gill, T. 1872 B, p. 81. (*Oreodontinæ*.)

- Lydekker, R. 1896 B, p. 373. (*Cotylopidæ*.)
 Schlosser, M. 1890 D, p. 722. ("Oreodonten.")
 Scott, W. B. 1889 C, p. 75. (*Oreodontinæ*.)
 1892 A, p. 434. (*Oreodontinæ*.)
 Zittel, K. A. 1893 B, p. 352. (*Oreodontidæ*.)

MERYCROIDODON Leidy. Type *M. culbertsonii* Leidy.

- Leidy, J. 1848 B, p. 47.

The generic name *Merycoidodon* clearly has priority over both *Oreodon* and *Cotylops*, notwithstanding the fact that it has been discarded by Leidy himself and succeeding writers. Unless otherwise indicated, the following authors employ the name *Oreodon*.

- Bettany, G. T. 1873 A.
 1876 A.
 Bruce, A. T. 1883 A, p. 36, figs. 1-4. (*Oreodon*.)
 Cope, E. D. 1884 H, p. 22.
 1884 M, p. 505.
 1885 B, p. 483.
 1887 B, p. 386.
 1887 S, p. 85.
 1888 X, p. 1093.
 Dawkins, W. B. 1870 A.
 Flower, W. H. 1873 A.
 Flower and Lydekker 1891 A, p. 293. (*Cotylops*.)
 Gaudry, A. 1878 B, p. 82.
 Grinnell and Dana 1876 A.
 Hay, O. P. 1899 A, p. 594. (*Merycoidodon*.)
 Leidy, J. 1851 D, p. 238 (*Oreodon*); p. 239 (*Cotylops*, type *C. speciosa*).
 1852 J, pp. 540, 548.
 1852 L, p. 64. (*Oreodon*, *Merycoidodon*.)
 1854 A, pp. 29, 47, 113.
 1869 A, pp. 72, 379.
 1870 P, p. 111.
 1871 C, p. 345.
 1873 B, p. 201.
 Marsh, O. C. 1873 H, p. 409.
 1875 B, p. 250.
 1877 E.
 1884 F, p. 172.
 Nicholson and Lydekker 1889 A, p. 1326. (*Cotylops*.)

- Schlosser, M. 1886 B, p. 47.
 Scott, W. B. 1884 C.
 1885 B.
 1889 C, p. 75.
 1890 A.
 1890 B, p. 320.
 1891 A, p. 53.
 1894 D.
 1894 H.
 1895 C, p. 125, *et seq.*
 1899 A, p. 87.

- Steinmann and Döderlein 1890 A, p. 799.
 Trouessart, E. L. 1898 A, p. 835.
 Woodward, A. S. 1898 B, p. 354.
 Wortman, J. L. 1895 A, p. 173.
 Zittel, K. A. 1893 B, p. 352.

Merycoidodon affinis (Leidy).

- Leidy, J. 1869 A, pp. 105, 380, pl. ix, fig. 3. (*Oreodon*.)
 Cope, E. D. 1884 M, p. 512. (*Oreodon*.)
 1884 T, p. 281. (*Oreodon*.)
 Leidy, J. 1869 A, p. 96, No. 10. (*Oreodon*.)
 1871 C, p. 346. (*Oreodon*.)
 1873 B, p. 212. (*Oreodon*.)
 Roger, O. 1896 A, p. 213. (*Oreodon*.)
 Trouessart, E. L. 1898 A, p. 835. (*Oreodon*.)
 Oligocene (White River); South Dakota.

Merycoidodon bullatus (Leidy).

- Leidy, J. 1869 A, pp. 106, 380. (*Oreodon*.)
 Cope, E. D. 1884 M, p. 517. (Syn. of *Eucrotaphus jacksoni*.)
 King, C. 1878 A, p. 411. (*Eporeodon*.)
 Leidy, J. 1871 C, p. 346. (*Oreodon*.)
 1873 B, p. 212 (*Oreodon bullatus*); p. 318 (*Oreodon culbertsonii*).

- Marsh, O. C. 1875 B, p. 250. (Eporeodon.)
 Matthew, W. D. 1899 A, p. 60. (Oreodon.)
 Osborn and Wortman 1894 A, p. 218, fig. 5c. (Oreodon.)
 Roger, O. 1896 A, p. 213. (O. jacksoni.)
 Scott, W. B. 1890 B, pl. xiii, fig. 6. (Oreodon.)
 Trouessart, E. L. 1898 A, p. 836. (Eucrotaphus.)
 Oligocene (White River); South Dakota.

Merycoidodon culbertsonii Leidy.

Leidy, J. 1848 B, p. 47, plate.

Unless otherwise indicated, the following authors refer to this species under the generic name *Oreodon*.

- Bettany, G. T. 1873 A.
 Cope, E. D. 1884 M, pp. 511, 512, 513. (O. culbertsonii and O. culbertsonii periculorum.)
 1888 X, p. 1094.
 Farr, M. S. 1896 A, p. 157.
 Gaudry, A. 1878 B, p. 81, fig. 90.
 Hayden, F. V. 1858 B, p. 157.
 King, C. 1878 A, p. 411.
 Leidy, J. 1851 D, p. 239 (Cotylops speciosa); p. 238 (O. priscum).
 1851 E, p. 276. (Oreodon robustum.)
 1852 J, p. 548, pl. x, figs. 4-6; pl. xiii, figs. 3, 4.
 1852 L, p. 64. (Oreodon priscum, M. culbertsonii.)
 1853 D, p. 392.
 1854 A, pp. 45, 113, pls. ii, iii; pl. iv, figs. 1-5; pl. v, figs. 1, 2; pl. vi, figs. 8-11.
 1854 E.
 1869 A, pp. 86, 379, pl. vi, fig. 1; pl. vii, fig. 2; pl. ix, fig. 1.
 1870 J, p. 67.
 1870 P, p. 112.
 1871 C, p. 345.
 1873 B, pp. 211, 318.
 Lydekker, R. 1885 C, p. 207.
 Marsh, O. C. 1870 D.
 Matthew, W. D. 1899 A, p. 60.
 Osborn and Wortman 1894 A, p. 215, fig. 5 A.
 Roger, O. 1896 A, p. 213.
 Scott, W. B. 1890 B, pl. xii; pl. xiii, fig. 4; pl. xvi, figs. 27-29; text figs. ii, iii, iv, x.
 Stewart, A. 1897 A, pl. i.

- Trouessart, E. L. 1898 A, p. 835.
 Zittel, K. A. 1893 B, p. 353, fig. 288.
 Oligocene (White River); South Dakota.

Merycoidodon gracilis Leidy.

- Leidy, J.* 1851 D, p. 239. (Oreodon.)
 Cope, E. D. 1874 B, p. 498. (Oreodon.)
 1884 M, pp. 511, 512. (Oreodon, with varieties gracilis and coloradoensis.)
 1884 T, p. 281. (Oreodon.)
 Hayden, F. V. 1858 B, p. 157. (Oreodon.)
 King, C. 1878 A, p. 411. (Oreodon.)
 Leidy, J. 1852 J, p. 550, pl. xi, figs. 2, 3; pl. xiii, figs. 5, 6. (Oreodon.)
 1852 L, p. 64. (Oreodon.)
 1853 D, p. 392. (Oreodon.)
 1854 A, p. 53, pl. v, figs. 3, 4; pl. vi, figs. 1-7. (Oreodon, Merycoidodon.)
 1854 E, p. 157. (Oreodon.)
 1869 A, pp. 94, 379, pl. vi, figs. 2, 3. (Oreodon.)
 1871 C, p. 346. (Oreodon.)
 1873 B, p. 211. (Oreodon.)
 Osborn and Wortman 1894 A, p. 216, fig. 5, B. (Oreodon.)
 Roger, O. 1896 A, p. 213. (Oreodon.)
 Scott, W. B. 1890 B, pl. xiii, fig. 5; text figs. i, ix, x, 5. (Oreodon.)
 Scott and Osborn 1887 B, p. 154. (Oreodon.)
 Trouessart, E. L. 1898 A, p. 835. (Oreodon.)
 Zittel, K. A. 1893 B, p. 353. (Oreodon.)
 Oligocene (White River); South Dakota, Nebraska, Colorado.

Merycoidodon hybridus (Leidy).

- Leidy, J.* 1869 A, pp. 105, 380, pl. ix, fig. 4. (Oreodon.)
 1871 C, p. 346. (Oreodon.)
 1873 B, p. 212. (Oreodon.)
 Roger, O. 1896 A, p. 213.
 Trouessart, E. L. 1898 A, p. 835.
 Oligocene (White River); South Dakota.

Merycoidodon minor Cope.

- Cope, E. D.* 1888 X, p. 1094. (Name only.)

EUCROTAPHUS Leidy. Type *E. jacksoni* Leidy.

- Leidy, J.* 1850 A, p. 90.
 Cope, E. D. 1884 H, p. 23.
 1884 M, pp. 504, 513.
 1884 T.
 1885 B, p. 484.
 1887 B, p. 386.
 1888 X, p. 1093.
 Leidy, J. 1851 D, p. 239.
 1852 J, p. 562.
 1852 L, p. 64.
 1854 A, pp. 56, 113.
 1854 C, p. 157.
 1873 B, p. 212.
 Nicholson and Lydekker 1889 A, p. 1327.
 Scott, W. B. 1890 B, p. 320. (Syn. of Oreodon.)

- Wortman, J. L. 1893 A.
 Zittel, K. A. 1893 B, pp. 352, 355.

Eucrotaphus jacksoni Leidy.

- Leidy, J.* 1850 A, p. 90.
 Cope, E. D. 1884 M, pp. 514, 517 (E. jacksoni); p. 519 (subsp. leptacanthus).
 Leidy, J. 1852 L, p. 65.
 1854 A, pp. 56, 113, pl. vii, figs. 4-6.
 1869 A, pp. 134, 381.
 Lydekker, R. 1877 A, p. 334. (Eporeodon.)
 Roger, O. 1896 A, p. 213. (Oreodon.)
 Scott, W. B. 1890 B, p. 372, fig. x, 2. (Oreodon.)
 Trouessart, E. L. 1898 A, p. 836.
 Oligocene (White River); South Dakota.

EPOREODON Marsh. Type *Oreodon occidentalis* Marsh.

- Marsh, O. C. 1875 B, p. 249.
 Lydekker, R. 1885 C, p. 208.
 Marsh, O. C. 1877 E, p. 365.
 Nicholson and Lydekker 1889 A, p. 1327.
 Osborn and Wortman 1894 A, p. 218.
 Schlosser, M. 1886 B, p. 47.
 Scott, W. B. 1890 B, p. 339.
 1895 C, p. 125.
 Trouessart, E. L. 1898 A, p. 836. (Syn. of *Eucrotaphus*.)
 Zittel, K. A. 1893 B, p. 355.

Epureodon longifrons (Cope).

- Cope, E. D. 1884 M, pp. 519, 520. (*Eucrotaphus major longifrons*.)
 Matthew, W. D. 1899 A, p. 64. (*Epureodon major*, var. *longifrons*.)
 Miocene (John Day); Oregon.

Epureodon? major (Leidy).

- Leidy, J. 1854 A, p. 55, pl. iv, fig. 6. (*Oreodon*, *Merycoidodon*.)
 Cope, E. D. 1884 M, pp. 519, 520. (*Eucrotaphus*.)
 1884 T, p. 281. (*Eucrotaphus*.)
 Hayden, F. V. 1858 B, p. 157. (*Oreodon*.)
 King, C. 1878 A, p. 411.
 Leidy, J. 1853 D. (*Oreodon*, no description.)
 1854 E. (Syn. of *Oreodon culbertsoni*.)
 1856 J, p. 164. (*Oreodon*.)
 1869 A, pp. 99, 380, pl. vii, fig. 1; pl. viii. (*Oreodon*.)
 1871 C, p. 346. (*Oreodon*.)
 Marsh, O. C. 1875 B, p. 250.
 1897 C, p. 524, fig. 98.
 Matthew, W. D. 1899 A, pp. 60, 64.
 Osborn and Wortman 1894 A, p. 218, fig. 5, D.
 Roger, O. 1896 A, p. 213.
 Scott, W. B. 1890 B, p. 339.
 Scott and Osborn 1887 B, p. 155. (*Eucrotaphus*.)
 Trouessart, E. L. 1898 A, p. 836. (*Eucrotaphus*.)
 Oligocene (White River); South Dakota,
 North Dakota, Colorado, Nebraska.

MESOREODON Scott. Type *M. chelonys* Scott.

- Scott, W. B. 1893 B, p. 661.
 1895 C, pp. 125, 164.

Mesoreodon chelonys Scott.

- Scott, W. B. 1893 B, p. 661.
 Matthew, W. D. 1899 A, p. 60.
 Roger, O. 1896 A, p. 214.
 Scott, W. B. 1895 C, p. 125, pl. iii, fig. 29; pl. iv, figs. 32-34; pl. v, figs. 35-42; pl. vi, figs. 46, 47.
 Trouessart, E. L. 1898 A, p. 836.
 Miocene (Deep River); Montana.

MERYCOCHÆRUS Leidy. Type *M. proprius* Leidy.

- Leidy, J. 1858 E, p. 24.
 Bettany, G. T. 1876 A.
 Cope, E. D. 1884 H, p. 23.
 1884 M, pp. 504, 520.
 1884 T.

Epureodon occidentalis Marsh.

- Marsh, O. C. 1873 H, p. 409. (*Oreodon*.)
 Cope, E. D. 1879 B, p. 59. (*Eucrotaphus*.)
 1884 M, p. 517. (Syn. of *Eucrotaphus jacksoni*.)
 King, C. 1878 A, p. 424.
 Leidy, J. 1873 B, p. 318 (Syn.? of *Oreodon bullatus*);
 ?pl. vii, fig. 12 (*Oreodon culbertsoni*.)
 Marsh, O. C. 1875 B, p. 250.
 1884 F, figs. 73, 162, 163.
 Matthew, W. D. 1899 A, p. 64.
 Trouessart, E. L. 1898 A, p. 836. (Syn. of *Eucrotaphus jacksoni*.)
 Miocene (John Day); Oregon.

Epureodon pacificus (Cope).

- Cope, E. D. 1884 M, p. 519. (*Eucrotaphus jacksoni pacificus*.)
 1884 H, p. 23. (*Eucrotaphus*.)
 1885 B, p. 484. (*Eucrotaphus*.)
 1888 X, p. 1094. (*Eucrotaphus*.)
 Matthew, W. D. 1899 A, p. 64. (*E. occidentalis* var. *pacificus*.)
 Trouessart, E. L. 1898 A, p. 836. (*Eucrotaphus*.)
 Miocene (John Day); Oregon.

Epureodon socialis Marsh.

- Marsh, O. C. 1885 B, figs. 128, 129.
 Matthew, W. D. 1899 A, p. 64.
 Roger, O. 1896 A, p. 213.
 Miocene (John Day); Oregon.

Epureodon trigonocephalus (Cope).

- Cope, E. D. 1884 M, p. 514. (*Eucrotaphus*.)
 1884 T, p. 281. (*Eucrotaphus*.)
 Matthew, W. D. 1899 A, p. 64.
 Roger, O. 1896 A, p. 213.
 Trouessart, E. L. 1898 A, p. 836. (*Eucrotaphus*.)
 Miocene (John Day); Oregon.

Mesoreodon intermedius Scott.

- Scott, W. B. 1893 B, p. 661.
 Matthew, W. D. 1899 A, p. 60.
 Roger, O. 1896 A, p. 214.
 Scott, W. B. 1895 C, p. 145, pl. v, figs. 43, 44.
 Trouessart, E. L. 1898 A, p. 836.
 Miocene (Deep River); Montana.

Cope, E. D. 1885 B, p. 484.

- 1888 X, p. 1093.
 1889 C.
 1889 G, p. 113.
 Leidy, J. 1869 A, p. 110.

Leidy, J. 1870 P, p. 111.

1871 C, p. 347.

1873 B, pp. 199, 202.

Marsh, O. C. 1877 E.

Nicholson and Lydekker 1889 A, p. 1327.

Osborn, H. F. 1901 A, p. 46.

Scott, W. B. 1889 C, p. 75.

1890 B, p. 340.

1891 D, p. 90.

1892 A, p. 435.

1894 E.

1895 C, p. 165.

Scott and Osborn 1890 B, p. 73.

Steinmann and Döderlein 1890 A, p. 800.

Trouessart, E. L. 1898 A, p. 837.

Zittel, K. A. 1893 B, p. 355.

Merycochoerus chelydra Cope.

Cope, E. D. 1884 M, pp. 521, 523.

1884 T, p. 281.

Matthew, W. D. 1899 A, p. 64.

Roger, O. 1896 A, p. 214.

Trouessart, E. L. 1898 A, p. 838.

Miocene (John Day); Oregon.

Merycochoerus cænopus Scott.

Scott, W. B. 1890 B, p. 346, pl. xvi, figs. 33, 34.

Matthew, W. D. 1899 A, p. 72. (M. cænopus.)

Roger, O. 1896 A, p. 214.

Scott and Osborn 1890 B, p. 73. (M. cænopus.)

Trouessart, E. L. 1898 A, p. 838.

Miocene (Loup Fork); Nebraska.

Merycochoerus laticeps Douglass.

Douglass, E. 1900 B, p. 428 figs. 1-3.

Miocene (Loup Fork); Montana.

Merycochoerus leidyi Bettany.

Bettany, G. T. 1876 A, p. 270, pl. xviii.

Cope, E. D. 1879 B, p. 59.

1884 M, pp. 521, 523.

Matthew, W. D. 1899 A, p. 64.

Roger, O. 1896 A, p. 214.

Trouessart, E. L. 1898 A, p. 838.

Miocene (John Day); Oregon.

Merycochoerus macrostegus Cope.

Cope, E. D. 1884 M, pp. 521, 526.

1884 T, p. 281.

Matthew, W. D. 1899 A, p. 64.

Roger, O. 1896 A, p. 214.

Scott, W. B. 1890 B, pl. xiv, figs. 8, 9.

Trouessart, E. L. 1898 A, p. 838.

Miocene (John Day); Oregon.

Merycochoerus montanus Cope.

Cope, E. D. 1884 M, pp. 521, 531.

1884 H, p. 23.

1884 T, p. 282.

1885 B, p. 484.

1886 B, p. 359.

1886 H.

1889 G, p. 113, fig. 9.

1895 C, p. 151.

Matthew, W. D. 1899 A, p. 72.

Roger, O. 1896 A, p. 214.

Scott, W. B. 1890 B, p. 342, text figs. v, vi.

1893 B, p. 659.

Trouessart, E. L. 1898 A, p. 838.

Miocene (Loup Fork); Montana.

Merycochoerus obliquidens Cope.

Cope, E. D. 1886 H, p. 368.

1886 B, p. 359.

Matthew, W. D. 1899 A, p. 72.

Roger, O. 1896 A, p. 214.

Trouessart, E. L. 1898 A, p. 838.

Miocene (Loup Fork); Oregon.

Merycochoerus proprius Leidy.

Leidy, J. 1858 E, p. 24.

Cope, E. D. 1884 M, pp. 521, 535.

1884 T, p. 282.

Hayden, F. V. 1858 B, p. 157.

King, C. 1878 A, p. 411.

Leidy, J. 1869 A, pp. 110, 380, pl. x.

1870 O, p. 109.

1871 C, p. 347.

1873 B, p. 201.

Matthew, W. D. 1899 A, p. 72.

Trouessart, E. L. 1898 A, p. 838.

Miocene (Loup Fork); Wyoming.

Merycochoerus rusticus Leidy.

Leidy, J. 1870 O, p. 109.

Cope, E. D. 1884 M, pp. 521, 535.

1884 T, p. 282.

Leidy, J. 1871 C, p. 347.

1873 B, pp. 199, 319, pl. iii, figs. 1-3; pl. vii, figs. 1-5; pl. xx, figs. 9-11.

Matthew, W. D. 1899 A, p. 72.

Roger, O. 1896 A, p. 214.

Scott, W. B. 1890 B, pp. 341, 348. (Merychynus.)

Trouessart, E. L. 1898 A, p. 838.

Miocene (Loup Fork); Wyoming.

Merycochoerus superbus (Leidy).

Leidy, J. 1870 P, p. 111. (Oreodon.)

Bettany, G. T. 1876 A, p. 269, pl. xvii. (M. temporalis.)

Cope, E. D. 1879 B, p. 59. (Eucrotaphus.)

1884 M, pp. 521, 522.

1884 T, p. 281.

1888 X, p. 1094, pl. xxvi.

King, C. 1878 A, p. 424. (Eporeodon.)

Leidy, J. 1871 C, p. 346. (Oreodon.)

1873 B, pp. 211, 319, pl. i, fig. 1; pl. ii, fig. 16; pl. vii, figs. 7-11. (Oreodon.)

Marsh, O. C. 1875 B, p. 250. (Eporeodon.)

Matthew, W. D. 1899 A, p. 64.

Roger, O. 1896 A, p. 214.

Scott, W. B. 1890 B, p. 339, pl. xiv, fig. 10.

Trouessart, E. L. 1898 A, p. 838.

Miocene (John Day); Oregon.

Merycochoerus sp. indet.

Leidy, J. 1873 B, p. 208, pl. xx, figs. 9-11.

MERYCHYUS Leidy. Type *M. elegans* Leidy.

- Leidy, J.* 1858 E, p. 25.
 Bettany, G. T. 1876 A.
 Cope, E. D. 1878 H, p. 380. (*Ticholeptus*, type *T. zygomaticus*.)
 1878 P. (*Ticholeptus*.)
 1884 M, pp. 504, 535.
 1884 T.
 1885 B, p. 484.
 1887 B, p. 386.
 1887 S, p. 85.
 1888 X, p. 1093.
 Dawkins, W. B. 1870 A, p. 232.
 Hayden, F. V. 1858 B, p. 157.
 Leidy, J. 1869 A, p. 115.
 1871 C, p. 347.
 1873 B, pp. 202, 213.
 Marsh, O. C. 1877 E.
 Nicholson and Lydekker 1889 A, p. 1327.
 Scott, W. B. 1889 C, p. 75.
 1890 B, p. 347, pl. xiv, fig. 36.
 1891 A, p. 53.
 1891 D, p. 90.
 1892 A, p. 435.
 1895 C, p. 165.
 Steinmann and Döderlein 1890 A, p. 800.
 Trouessart, E. L. 1898 A, p. 837.
 Zittel, K. A. 1893 B, p. 355.

Merychys arenarum Cope.

- Cope, E. D.* 1884 M, pp. 536, 537, 540. (With subsp. *leptorhynchus*.)
 1884 H, p. 23.
 1884 T, p. 282.
 1885 B, p. 484.
 1888 X, p. 1080, pl. xxvi.
 Matthew, W. D. 1899 A, p. 72.
 Roger, O. 1896 A, p. 214.
 Scott, W. B. 1890 B, pl. xiii, fig. 7; pl. xvi, figs. 30-32.
 Trouessart, E. L. 1898 A, p. 837.
 Miocene (Loup Fork); Wyoming.

Merychys elegans Leidy.

- Leidy, J.* 1858 E, p. 24.
 Bettany, G. T. 1876 A.
 Cope, E. D. 1874 B, p. 529.
 1874 P, p. 19.
 1884 M, pp. 536, 545.
 1884 T, p. 282.
 King, C. 1878 A, p. 430.
 Leidy, J. 1869 A, pp. 118, 380, pl. xi, figs. 1-11.
 1871 C, p. 348.
 1873 B, p. 201.
 Matthew, W. D. 1899 A, p. 72.
 Roger, O. 1896 A, p. 214.
 Scott and Osborn 1890 B, p. 72.
 Trouessart, E. L. 1898 A, p. 837.
 Miocene (Loup Fork); Nebraska.

Merychys major Leidy.

- Leidy, J.* 1858 E, p. 26.
 Cope, E. D. 1874 B, p. 529.
 1874 P, p. 19.

- Cope, E. D. 1884 M, pp. 536, 545.
 1884 T, p. 282.
 Hayden, F. V. 1858 B, p. 157.
 Leidy, J. 1869 A, pp. 121, 380, pl. xi, figs. 15, 16.
 1870 O, p. 109.
 1871 C, p. 348.
 1873 B, p. 201.
 Matthew, W. D. 1899 A, p. 72.
 Roger, O. 1896 A, p. 214.
 Trouessart, E. L. 1898 A, p. 837.
 Zittel, K. A. 1893 B, p. 355.
 Miocene (Loup Fork); Nebraska, Colorado.

Merychys medius Leidy.

- Leidy, J.* 1858 E, p. 26.
 Cope, E. D. 1875 F, p. 70.
 1877 K, p. 324.
 1884 M, pp. 536, 545.
 1884 T, p. 282.
 Dawkins, W. B. 1870 A, p. 232.
 Hayden, F. V. 1858 B, p. 157.
 Leidy, J. 1869 A, pp. 119, 121, 380, pl. xi, figs. 12-14.
 1870 O, p. 109.
 1871 C, p. 348.
 1873 B, p. 201.
 Matthew, W. D. 1899 A, p. 72.
 Roger, O. 1896 A, p. 214.
 Trouessart, E. L. 1898 A, p. 837.
 Miocene (Loup Fork); Nebraska, New Mexico, Colorado.

Merychys pariogonus Cope.

- Cope, E. D.* 1884 M, pp. 536, 542.
 1884 T, p. 282.
 1886 B, p. 359.
 1886 H.
 Matthew, W. D. 1899 A, p. 72.
 Roger, O. 1896 A, p. 214.
 Scott, W. B. 1893 B, p. 659.
 1895 C, p. 148.
 Trouessart, E. L. 1898 A, p. 837.
 Miocene (Loup Fork); Wyoming, Montana.

Merychys zygomaticus Cope.

- Cope, E. D.* 1878 P, p. 129. (*Ticholeptus*.)
 1878 H, p. 380. (*Ticholeptus*.)
 1884 M, pp. 536, 545.
 1884 T, p. 282.
 1886 B, p. 359.
 1886 H.
 Matthew, W. D. 1899 A, p. 72.
 Roger, O. 1896 A, p. 214.
 Scott, W. B. 1893 B, p. 659.
 1895 C, p. 146, pl. v, fig. 45.
 Trouessart, E. L. 1898 A, p. 837.
 Miocene (Loup Fork); Montana.
 Dr. W. D. Matthew (1899 A, p. 72) has attributed to Cope a species, *Merychys euryops*, but search has failed to discover the name in any of Cope's papers. It is probably a manuscript name only.

LEPTAUCHENIA Leidy. Type *L. decora* Leidy.

Leidy, J. 1856 I, p. 88.

Cope, E. D. 1884 M, pp. 504, 546.

1887 B, p. 386.

1888 X, p. 1093.

Leidy, J. 1858 E, p. 25.

1869 A, p. 122.

1871 C, p. 348.

Matthew, W. D. 1899 A, p. 24.

Nicholson and Lydekker 1889 A, p. 1327.

Schlosser, M. 1886 B, p. 49.

Scott, W. B. 1890 B, p. 353.

1892 A, p. 435.

1895 C, p. 166.

1899 A, p. 96.

Trouessart, E. L. 1898 A, p. 838.

Zittel, K. A. 1893 B, p. 355.

Leptauchenia decora Leidy.

Leidy, J. 1856 I, p. 88.

Cope, E. D. 1884 M, p. 546.

Hayden, F. V. 1858 B, p. 157.

Leidy, J. 1869 A, pp. 127, 381, pl. xii, figs. 21, 22.

1871 C, p. 348.

Matthew, W. D. 1899 A, p. 61.

Roger, O. 1896 A, p. 215.

Trouessart, E. L. 1898 A, p. 838.

Oligocene (White River); South Dakota, Colorado.

CYCLOPIDIUS Cope.

Cope, E. D. 1878 C, p. 221.

1878 C, p. 219 (Pithecestes, type *P. brevifacies*); p. 220 (Brachymeryx, type *B. feliceps*=*Cyclopidius simus*, juv.).

1878 L. (Cyclopidius, Brachymeryx, Pithecestes.)

1884 M, pp. 504, 546 (Cyclopidius); pp. 504, 557 (Pithecestes).

1884 T.

1886 B, p. 359.

1887 B, p. 386. (Cyclopidius, Pithecestes.)

1888 X, p. 1093. (Cyclopidius, Pithecestes.)

Matthew, W. D. 1899 A, pp. 24, 73.

Nicholson and Lydekker 1889 A, p. 1327. (Cyclopidius, Pithecestes.)

Scott, W. B. 1890 B, p. 356 (Cyclopidius); p. 357 (Pithecestes).

1891 B, p. 370. (Pithecestes.)

1891 D, p. 90. (Cyclopidius, Pithecestes.)

1892 A, p. 435. (Cyclopidius, Pithecestes.)

1895 C, p. 162 (Cyclopidius); p. 164 (Pithecestes).

Steinmann and Döderlein 1890 A, p. 800.

Zittel, K. A. 1893 B, p. 356. (Cyclopidius, Pithecestes.)

Cyclopidius brevifacies (Cope).

Cope, E. D. 1878 C, p. 219. (Pithecestes.)

1884 M, p. 558. (Pithecestes.)

1884 T, p. 212. (Pithecestes.)

1886 B, p. 359. (Pithecestes.)

1886 H. (Pithecestes.)

Matthew, W. D. 1899 A, p. 73. (Cyclopidius.)

Roger, O. 1896 A, p. 215. (Pithecestes.)

Leptauchenia major Leidy.

Leidy, J. 1856 J, p. 163.

Cope, E. D. 1884 M, p. 546.

Hayden, F. V. 1858 B, p. 157.

King, C. 1878 A, p. 411.

Leidy, J. 1869 A, pp. 124, 380, pl. xii, figs. 1-5.

1871 C, p. 348.

Matthew, W. D. 1899 A, p. 61.

Roger, O. 1896 A, p. 215.

Scott, W. B. 1890 B, pl. xv, figs. 15, 16.

Trouessart, E. L. 1898 A, p. 838.

Oligocene (White River); South Dakota.

Leptauchenia nitida Leidy.

Leidy, J. 1869 A, pp. 129, 381, pl. xii, figs. 21, 22.

Cope, E. D. 1884 M, p. 546.

1884 T, p. 282.

Leidy, J. 1871 C, p. 348.

Matthew, W. D. 1899 A, p. 61.

Roger, O. 1896 A, p. 215.

Scott, W. B. 1890 B, pl. xvi, fig. 35.

Trouessart, E. L. 1898 A, p. 838.

Oligocene (White River); South Dakota.

Type *C. simus* Cope.

Scott, W. B. 1890 B, pl. xv, figs. 20, 21. (Pithecestes.)

1893 B, p. 659. (Pithecestes.)

Trouessart, E. L. 1898 A, p. 839. (Pithecestes.)

Miocene (Loup Fork); Montana.

Cyclopidius decedens (Cope).

Cope, E. D. 1884 M, p. 558. (Pithecestes.)

1884 T, p. 282. (Pithecestes.)

1886 B, p. 359. (Pithecestes.)

1886 H. (Pithecestes.)

Matthew, W. D. 1899 A, p. 73. (Cyclopidius.)

Roger, O. 1896 A, p. 215. (Pithecestes.)

Scott, W. B. 1893 B, p. 659. (Pithecestes.)

Trouessart, E. L. 1898 A, p. 839. (Pithecestes.)

Miocene (Loup Fork); Montana.

Cyclopidius emydinus Cope.

Cope, E. D. 1884 M, p. 558.

1884 T, p. 282.

1886 B, p. 359.

1886 H.

1888 X, pl. xxviii.

Roger, O. 1896 A, p. 215.

Scott, W. B. 1890 B, pl. xv, figs. 17-19.

1893 B, p. 659.

Trouessart, E. L. 1898 A, p. 839.

Zittel, K. A. 1893 B, p. 356, fig. 291.

Miocene (Deep River); Montana.

Cyclopidius heterodon Cope.

Cope, E. D. 1878 C, p. 222. (Cyclopidius.)

1884 M, p. 559. (Pithecestes.)

1884 T, p. 282. (Pithecestes.)

- Cope, E. D. 1886 B, p. 359. (Pitheciest.)
 1886 H. (Pitheciest.)
 Matthew, W. D. 1899 A, p. 73. (Cyclopidius.)
 Roger, O. 1896 A, p. 215. (Pitheciest.)
 Scott, W. B. 1893 B, p. 659. (Pitheciest.)
 Trouessart, E. L. 1898 A, p. 839. (Pitheciest.)
 Miocene (Loup Fork); Montana.

Cyclopidius incisivus Scott.

- Scott, W. B. 1893 B, p. 659.
 Matthew, W. D. 1899 A, p. 73.
 Roger, O. 1896 A, p. 215.
 Scott, W. B. 1893 C, p. 163.

HADROHYUS Leidy. Type *H. supremus* Leidy.

- Leidy, J. 1871 M, p. 248.
 1873 B, p. 222.

A genus of uncertain position; founded on unsatisfactory material.

- Trouessart, E. L. 1898 A, p. 839.
 Miocene (Loup Fork); Montana.

Cyclopidius simus Cope.

- Cope, E. D. 1878 C, p. 221.
 1878 C, p. 220. (Brachymeryx feliceps.)
 1884 M, p. 547.
 1884 T, p. 282.
 1886 H.
 Roger, O. 1896 A, p. 215.
 Scott, W. B. 1893 B, p. 659.
 Trouessart, E. L. 1898 A, p. 839.
 Miocene (Deep River); Montana.

Hadrohyus supremus Leidy.

- Leidy, J. 1871 M, p. 248.
 1873 B, pp. 222, 331, pl. xvii, fig. 26.
 Miocene; Oregon.

LEPTOMERYCINÆ.

- Cope, E. D. 1879 B, p. 66. (Hypertragulidæ, in part.)
 1889 G, p. 121. (Hypisodontidæ.)
 Roger, O. 1896 A, p. 226.

- Scott, W. B. 1899 A, p. 15. (Leptomerycidæ.)
 Trouessart, E. L. 1898 A, p. 863.
 Zittel, K. A. 1893 B, p. 389.

LEPTOMERYX Leidy. Type *L. evansi* Leidy.

- Leidy, J. 1853 D, p. 394.

- Cope, E. D. 1873 T, p. 8. (Trimerodus, type *T. cedrensis*.)

- 1874 E, p. 110.
 1874 P, p. 26.
 1879 A, p. 44.
 1884 H, p. 23.
 1884 DD.
 1885 B, p. 484.
 1887 B, p. 389.
 1889 G, p. 121.

- Farr, M. S. 1896 A, p. 163.

- Flower and Lydekker 1891 A, p. 307.

- Leidy, J. 1869 A, p. 165.

- 1871 C, p. 351.

- Lydekker, R. 1887 A, p. 332.

- Nicholson and Lydekker 1889 A, p. 1333.

- Osborn and Wortman 1892 B.

- Rütimeyer, L. 1883 A, p. 98.

- Scott, W. B. 1891 A, p. 3.

- 1891 B, p. 342.

- 1891 C, p. 63.

- 1892 A, p. 436.

- 1895 A.

- 1898 C, p. 77.

- 1899 A, pp. 15-111.

- Steinmann and Döderlein 1890 A, p. 802.

- Wortman, J. L. 1893 A.

- Zittel, K. A. 1893 B, p. 389.

Leptomeryx esulcatus Cope.

- Cope, E. D. 1889 I, p. 154.

- 1891 A, p. 22, pl. xiv, fig. 5.

- Matthew, W. D. 1899 A, p. 61.

- Roger, O. 1896 A, p. 226.

- Trouessart, E. L. 1898 A, p. 863.

Oligocene (White River); Canada.

Leptomeryx evansi Leidy.

- Leidy, J. 1853 D, p. 394.

- Cope, E. D. 1873 T, p. 8. (Trimerodus cedrensis.)

- 1873 CC, p. 14. (Trimerodus cedrensis.)

- 1874 B, pp. 464, 508.

- 1874 P, p. 27.

- 1879 B, p. 66.

- 1879 D, p. 63.

- 1884 H, p. 23.

- 1885 B, p. 484.

- 1889 G, p. 122.

- Hayden, F. V. 1858 B, p. 157.

- King, C. 1878 A, p. 411.

- Leidy, J. 1854 E, p. 157.

- 1857 D, p. 176. (Dorcatherium.)

- 1869 A, pp. 165, 383, pl. xiv, figs 1-8.

- 1870 P, p. 112.

- 1871 C, p. 351.

- 1873 B, pp. 216, 317. (Except John Day specimens.)

- Lydekker, R. 1887 A, p. 333.

- Major, Fors. 1873 A, p. 105.

- Matthew, W. D. 1899 A, p. 61.

- Roger, O. 1896 A, p. 226.

- Scott, W. B. 1891 B, p. 343, figs. D-I.

- 1891 A, p. 15, pl. i, figs. 1, 2.

- Scott and Osborn 1887 B, p. 156.

- Trouessart, E. L. 1898 A, p. 863.

Oligocene (White River); South Dakota, Colorado, Nebraska.

Leptomeryx mammifer Cope.

- Cope, E. D. 1886 U, p. 84.

- Ami, H. M. 1891 A.

- Cope, E. D. 1885 H, p. 163. (No description.)

- 1889 I, p. 154.

- Cope, E. D. 1891 A, p. 22, pl. xiv, figs. 6, 7.
 Matthew, W. D. 1899 A, p. 61.
 Roger, O. 1896 A, p. 226.
 Trouessart, E. L. 1898 A, p. 863.
 Oligocene (White River); Canada, Colorado.

Leptomeryx semicinctus Cope.

- Cope, E. D. 1889 I, p. 154.
 1891 A, p. 23, pl. xiv, fig. 8.
 Matthew, W. D. 1899 A, p. 61.
 Roger, O. 1896 A, p. 226.
 Trouessart, E. L. 1898 A, p. 863.
 Oligocene (White River); Canada.

Hypisodus Cope. Type *H. ringens* Cope.

- Cope, E. D. 1873 CC, p. 5.
 1873 R, p. 419.
 1874 B, p. 501.
 1874 E.
 1884 H, p. 25.
 1884 DD, p. 1036.
 1885 B, p. 486.
 1887 B, p. 389.
 1889 G, p. 121.
 Scott, W. B. 1891 B, p. 351.
 1899 A, pp. 19, 112.
 Zittel, K. A. 1893 B, p. 389.

Hypisodus minimus Cope.

- Cope, E. D. 1873 T, p. 8. (Leptauchenia.)

- Cope, E. D. 1873 R, p. 419.

- 1873 CC, p. 7 (*H. ringens*); p. 14 (*Leptauchenia minima*.)
 1874 B, p. 501. (*H. minimus*, with *H. cingens* as synonym.)
 1874 P, p. 26.
 1884 H, p. 25.
 1885 B, p. 486.
 1889 G, p. 122.
 Matthew, W. D. 1899 A, p. 61.
 Roger, O. 1896 A, p. 226.
 Scott and Osborn 1887 B, p. 157.
 Trouessart, E. L. 1898 A, p. 863. (With *H. cingens* as synonym.)
 Oligocene (White River); Colorado.

Oromeryx Marsh. Type *O. plicatus* Marsh.

- Marsh, O. C. 1894 L, p. 269.
 Cope, E. D. 1894 E, p. 869.
 Marsh, O. C. 1877 E, p. 364. (Insufficient definition: no species.)
 Scott, W. B. 1898 C, pp. 77, '78.
 1899 A, pp. 83, 114.
 Scott and Osborn 1887 A, p. 259. (Name only.)
 Zittel, K. A. 1893 B, p. 361.

Oromeryx plicatus Marsh.

- Marsh, O. C. 1894 L, p. 269, fig. 23.
 Matthew, W. D. 1899 A, p. 50.
 Roger, O. 1896 A, p. 215.
 Trouessart, E. L. 1898 A, p. 839.
 Eocene (Uinta); Utah.

Camelomeryx Scott. Type *C. longiceps* Scott.

- Scott, W. B. 1898 C, p. 77.
 1899 A, pp. 67, 82, 114.

Camelomeryx longiceps Scott.

- Scott, W. B. 1898 C, p. 78.

- Matthew, W. D. 1899 A, p. 50.
 Scott, W. B. 1899 A, p. 67, pl. iii, figs. 15-18.
 Wortman, J. L. 1898 A, p. 97. (*Bunomeryx montanus*, in part.)
 Eocene (Uinta); Wyoming.

Leptoreodon Wort. Type *L. marshi* Wort.

- Wortman, J. L. 1898 A, p. 95.
 Scott, W. B. 1898 C, p. 75. (*Merycodesmus*, type *M. gracilis* Scott.)
 1899 A, pp. 51, 64, 113.

Leptoreodon gracilis Scott.

- Scott, W. B. 1898 C, p. 76. (*Merycodesmus*.)
 Matthew, W. D. 1899 A, p. 50. (Syn. of *L. marshi*.)
 Scott, W. B. 1899 A, pp. 52, 67, pl. ii, figs. 10-14.
 Eocene (Uinta); Utah.

Leptoreodon marshi Wort.

- Wortman, J. L. 1898 A, p. 95, fig. 1.
 Matthew, W. D. 1899 A, p. 50.
 Scott, W. B. 1899 A, pp. 52, 67.
 Trouessart, E. L. 1899 A, p. 1348.
 Eocene (Uinta); Utah.

Stibarus Cope. Type *S. obtusilobus* Cope.

- Cope, E. D. 1873 T, p. 3.
 1874 B, p. 503.
 1886 C, pp. 614, 619.
 1893 G, p. 148.
 Zittel, K. A. 1893 B, p. 361.
 The systematic position of this genus is doubtful.

Stibarus obtusilobus Cope.

- Cope, E. D. 1873 T, p. 3.

- Cope, E. D. 1873 CC, p. 9.
 1874 B, p. 503.
 1886 C, p. 618. ("Stibarus.")
 Matthew, W. D. 1899 A, p. 61.
 Roger, O. 1896 A, p. 215.
 Trouessart, E. L. 1898 A, p. 840.
 Oligocene (White River); Colorado.

PROTOCERATINÆ.

- Zittel, K. A. 1893 B, p. 405.
 Lydekker, R. 1896 B, p. 376. (Protoceratidæ.)
 Marsh, O. C. 1891 A, p. 82. (Protoceratidæ.)
 1897 D, p. 165. (Protoceratidæ.)
 Osborn, H. F. 1892 B, p. 353. (Protoceratidæ.)

- Osborn, H. F. 1893 I, p. 322. (Protoceratidæ.)
 Roger, O. 1896 A, p. 237.
 Scott, W. B. 1899 A, p. 19.
 Woodward, A. S. 1898 B, p. 361. (Protoceratidæ.)

PROTOCERAS Marsh. Type *P. celer* Marsh.

- Marsh, O. C. 1891 A, p. 81.
 Cope, E. D. 1893 G, p. 147.
 Lydekker, R. 1896 B, p. 376.
 Marsh, O. C. 1897 D, p. 165.
 Osborn, H. F. 1893 D, p. 42.
 1893 E.
 1893 I, p. 321.
 Osborn and Wortman 1892 B, p. 351.
 Scott, W. B. 1895 A.
 1898 C, p. 77.
 1899 A, pp. 19-112.
 Woodward, A. S. 1898 B, p. 362.
 Wortman, J. L. 1893 A.
 1898 A, p. 99.
 Zittel, K. A. 1893 B, p. 405.

- Osborn, H. F. 1893 I, p. 321, figs. 1-3.
 1893 L, p. 128.
 1896 C, pp. 712, 715, illus. 8.
 1898 Q, p. 16.
 Osborn and Wortman 1892 B, pp. 353-371, figs. 1-6.
 Roger, O. 1896 A, p. 236.
 Scott, W. B. 1895 A, pls. xx-xxii.
 Trouessart, E. L. 1898 A, p. 864.
 Woodward, A. S. 1898 B, p. 362, fig. 206.
 Zittel, K. A. 1893 B, p. 405, fig. 388.
 Oligocene (White River); South Dakota.

Protoceras comptus Marsh.

- Marsh, O. C. 1894 F, p. 93.
 1897 D, p. 172, pl. vi, fig. 2.
 Matthew, W. D. 1899 A, p. 61.
 Roger, O. 1896 A, p. 237.
 Trouessart, E. L. 1898 A, p. 864.
 Oligocene (White River); South Dakota.

Protoceras nasutus Marsh.

- Marsh, O. C. 1897 D, p. 168, fig. 5.
 Matthew, W. D. 1899 A, p. 61.
 Oligocene (White River); South Dakota.

CALOPS Marsh. Type *C. cristatus* Marsh.

- Marsh, O. C. 1894 F, p. 94.
 1897 D, p. 174.

Calops consors Marsh.

- Marsh, O. C. 1897 D, p. 175, pl. vii, figs. 1, 2.
 Matthew, W. D. 1899 A, p. 61.
 Oligocene (White River); South Dakota.

Calops cristatus Marsh.

- Marsh, O. C. 1894 F, p. 94.
 1894 L, p. 273.
 Matthew, W. D. 1899 A, p. 61.
 Roger, O. 1896 A, p. 237.
 Trouessart, E. L. 1898 A, p. 864.
 Oligocene (White River); South Dakota.

CAMELIDÆ.

- Ameghino, F. 1889 A, p. 579.
 Baur, G. 1885 I, p. 196.
 Branco, W. 1897 A, p. 24.
 Cope, E. D. 1874 B, p. 464.
 1874 M.
 1875 Q.
 1876 G, p. 146.
 1877 K, p. 342.
 1881 J, p. 546.
 1884 G, p. 16.
 1884 H, p. 26.
 1886 C.
 1887 B, pp. 379, 391.
 1887 S, p. 222.
 1888 X, p. 1080.
 1889 C.
 1889 G, p. 119.

- Flower, W. H. 1876 B, xiii, p. 328.
 Flower and Lydekker 1891 A, p. 295.
 Gill T. 1872 B, p. 71.
 Huxley, T. H. 1872 A, p. 328.
 Leidy, J. 1871 C, p. 349.

- Lydekker, R. 1885 C, p. 139.
 1896 B, p. 163.
 Marsh, O. C. 1877 E.
 Matthew, W. D. 1899 A, p. 22, *et seq.*
 Nicholson and Lydekker 1889 A, p. 1334.
 Osborn, H. F. 1900 C, p. 568.
 Owen, R. 1845 B, p. 528.
 1868 A, p. 349.
 1870 C.
 Roger, O. 1896 A, p. 215.
 Rüttimeyer, L. 1877 A.
 1878 A, p. 19.
 1883 A, p. 9. (Camelina.)
 Schmidt, O. 1886 A, p. 154.
 Scott, W. B. 1891 A.
 1899 A, pp. 22, 116.
 Steinmann and Döderlein 1890 A, p. 800.
 Tornier, G. 1888 A.
 Wilckens, M. 1885 C.
 Wortman, J. L. 1898 A.
 Zilliken, J. E. 1879 A.
 Zittel, K. A. 1893 B, p. 357.

LEPTOTRAGULINÆ.

Cope, E. D. 1879 B, p. 66. (Hypertragulidæ, in part.)
 Roger, O. 1896 A, p. 215.

LEPTOTRAGULUS Scott and Osb.

Scott and Osborn 1887 A, p. 258.
 Cope, E. D. 1889 G, p. 119.
 1890 C, p. 471.
 1894 E, p. 869.
Flower and Lydekker 1891 A, p. 304.
Nicholson and Lydekker 1889 A, p. 1334.
Osborn, H. F. 1893 D, p. 42.
Scott, W. B. 1890 A, p. 479.
 1891 A, pp. 10, 47.
 1892 A, p. 435.
 1898 C, p. 75.
 1899 A, pp. 47, 113.
Steinmann and Döderlein 1890 A, p. 800.
Trouessart, E. L. 1898 A, p. 840.

PARAMERYX Marsh.

Marsh, O. C. 1894 L, p. 269.
 Cope, E. D. 1894 E, p. 869. (Syn. of *Leptotragulus*.)
 Marsh, O. C. 1877 E, p. 364. (Insufficient definition; no species.)
Scott, W. B. 1890 A, p. 488.
 1898 C, pp. 74, 77.
 1899 A, p. 47. (Syn? of *Leptotragulus*.)
Scott and Osborn 1887 A, p. 259.
Wilckens, M. 1885 C, p. 418.
Wortmann, J. L. 1898 A, p. 103.

Parameryx lævis Marsh.

Marsh, O. C. 1894 L, p. 269, figs. 20, 21.

ITHYGRAMMODON Osb., Scott, and Speir.

Osborn, Scott, and Speir 1878 A, p. 56.
 Cope, E. D. 1886 C, p. 613.
 1887 B, p. 391.
Scott, W. B. 1891 A, p. 9.
Zittel, K. A. 1893 B, p. 361.

Ithygrammodon cameloides Osb., Scott, and Speir.

Osborn, Scott, and Speir 1878 A, p. 57, pl. x, figs. 1-4.

HYPERTRAGULUS Cope.

Cope, E. D. 1873 R, p. 419.
 1874 B, p. 502.
 1874 E.
 1874 P, p. 26.
 1884 H, p. 24.
 1885 B, p. 485.
 1887 B, p. 389.
 1889 G, p. 120.
Flower and Lydekker 1891 A, p. 307.
Nicholson and Lydekker 1889 A, p. 1334.
Rütimeyer, L. 1883 A, p. 99.
Schlosser, M. 1886 B, p. 75.
Scott, W. B. 1891 D, p. 90.
 1895 A.
 1899 A, pp. 17-112.
Zittel, K. A. 1893 B, p. 389.

Trouessart, E. L. 1898 A, p. 839.
Zittel, K. A. 1893 B, p. 361.

Type *L. proavus* Scott and Osb.

Wortman, J. L. 1898 A, p. 103. (Parameryx, in part.)
Zittel, K. A. 1893 B, p. 361.

Leptotragulus proavus Scott and Osb.

Scott and Osborn 1887 A, p. 258.
Matthew, W. D. 1899 A, p. 50.
Roger, O. 1896 A, p. 215.
Scott and Osborn 1890 A, p. 479, pl. vii, figs. 9-16.
Trouessart, E. L. 1898 A, p. 840.
Wortman, J. L. 1898 A, p. 103. (Parameryx.)
Zittel, K. A. 1893 B, p. 361.
 Eocene (Uinta); Wyoming.

Type *P. lævis* Marsh.

Cope, E. D. 1894 E, p. 869.
 Matthew, W. D. 1899 A, p. 50.
 Roger, O. 1896 A, p. 215. (*Leptotragulus*.)
 Trouessart, E. L. 1898 A, p. 840. (*Leptotragulus*.)
 Eocene (Uinta); Wyoming.

Parameryx sulcatus Marsh.

Marsh, O. C. 1894 L, p. 269.
 Matthew, W. D. 1899 A, p. 50.
 Roger, O. 1896 A, p. 215. (*Leptotragulus*.)
 Trouessart, E. L. 1898 A, p. 840. (*Leptotragulus*.)
 Eocene (Uinta); Wyoming.

Type *I. cameloides* Osb., Scott, and Speir.

Cope, E. D. 1886 C, p. 613.
 1887 B, p. 391.
 Matthew, W. D. 1899 A, p. 47.
 Roger, O. 1896 A, p. 215.
 Trouessart, E. L. 1898 A, p. 840.
 Eocene (Bridger); Wyoming.

Type *H. calcaratus* Cope.**Hypertragulus calcaratus** Cope.

Cope, E. D. 1873 T, p. 7. (*Leptauchenia*.)
 1873 R, p. 419. (*H. calcaratus*, *H. trico-*
 tatus.)
 1873 CC, p. 14. (*Leptauchenia*.)
 1874 B, p. 502 (*H. calcaratus*); p. 503 (*H.*
 trico-
 status.)
 1874 P, p. 26 (*H. calcaratus*); p. 27 (*H.*
 trico-
 status.)
 1879 B, p. 66.
 1879 D, p. 63. (In part.)
 1884 H, p. 24. (In part.)
 1885 B, p. 485. (In part.)
 Matthew, W. D. 1899 A, p. 61. (*H. calcaratus*, *H.*
trico-
status.)

Roger, O. 1896 A, p. 226. (H. calc., H. tricoatus.)
 Scott, W. B. 1893 B, p. 659.
 1895 C, p. 167.
 1899 A, p. 17. (In part.)
 Trouessart, E. L. 1898 A, p. 863. (H. calc., H. tricoatus.)
 Oligocene (White River); Colorado, South Dakota, Montana, Canada: (Deep River beds?)
 Montana?

Leidy, J. 1873 B, pp. 216, 317. (Leptomeryx evansi, John Day specimens.)
 Scott, W. B. 1893 B, p. 659. (H. calcaratus.)
 1895 C, p. 167. (H. calcaratus.)
 1899 A, p. 17, in part; pl. i, figs. 3, 4. (H. calcaratus.)
 Miocene (John Day); Oregon: (Deep River?);
 Montana?

Hypertragulus hesperius sp. nov.

Cope, E. D. 1879 B, p. 66. (H. calcaratus and Leptomeryx evansi, John Day specimens.)
 1879 D, p. 63. (H. calcaratus, in part.)
 1884 H, p. 24. (H. calcaratus, in part.)
 1885 B, p. 485. (H. calcaratus, in part.)
 1889 G, p. 122, pl. vi. (H. calcaratus.)

Hypertragulus transversus Cope.

Cope, E. D. 1889 I, p. 154.
 1891 A, p. 22, pl. xiv, fig. 4.
 Matthew, W. D. 1899 A, p. 61.
 Roger, O. 1896 A, p. 226.
 Trouessart, E. L. 1898 A, p. 864.
 Oligocene (White River); Canada.

POEBROTHERIINÆ.

Unless otherwise indicated, the following writers regard this group as a family, the Poebrotheriidae.

Cope, E. D. 1874 P, p. 26.
 1874 B, p. 464.
 1884 M, p. 503.
 1886 C, p. 613.
 1887 B, pp. 379, 390.

Cope, E. D. 1888 X, p. 1080.
 1889 G, p. 119.
 Lydekker, R. 1885 C, p. 149.
 Nicholson and Lydekker 1889 A, p. 1334.
 Roger, O. 1896 A, p. 216. (Poebrotherinae.)
 Trouessart, E. L. 1898 A, p. 840. (Poebrotherinae.)
 Zittel, K. A. 1893 B, p. 361. (Poebrotherinae.)

PROTYLOPUS Wort. Type *P. petersoni* Wort.

Wortman, J. L. 1898 A, pp. 104, 136.
 Scott, W. B. 1899 A, pp. 22-113.

Protylopus petersoni Wort.

Wortman, J. L. 1898 A, p. 104, figs. 3-6.

Matthew, W. D. 1899 A, p. 50.
 Scott, W. B. 1899 A, p. 22, pl. ii, figs. 5-9.
 Trouessart, E. L. 1899 A, p. 1349.
 Eocene (Uinta); Utah.

POEBROTHERIUM Leidy. Type *P. wilsoni* Leidy.

Leidy, J. 1847 B, p. 322.
 Baur, G. 1885 H, p. 196.
 Branco, W. 1897 A, p. 24.
 Bruce, A. T. 1883 A, p. 39.
 Cope, E. D. 1874 B, p. 498.
 1874 E.
 1874 P, p. 26.
 1875 Q, p. 262.
 1876 G, p. 146.
 1884 H, pp. 25, 26.
 1885 B, pp. 482, 486.
 1886 C, p. 618.
 1887 B, p. 390.

Flower and Lydekker 1891 A, p. 304.

Leidy, J. 1848 A.

1852 J, p. 571. (Poebrotherium.)
 1852 L, p. 64. (Poebrotherium, misprint.)
 1854 A, p. 113.
 1869 A, p. 141.
 1871 C, p. 350.

Lydekker, R. 1885 C, p. 149.

Marsh, O. C. 1877 E.

Nicholson and Lydekker 1889 A, p. 1334.

Schlosser, M. 1886 B, p. 48.

Scott, W. B. 1890 A, p. 483.

Scott, W. B. 1891 A.
 1891 D, p. 90.
 1892 A, p. 435.
 1895 C, p. 179.
 1898 C, p. 74. (Parameryx.)
 1899 A, p. 23 *et seq.*

Steinmann and Döderlein 1898 A, p. 800.

Trouessart, E. L. 1898 A, p. 840.

Wilckens, M. 1885 C, p. 419.

Woodward, A. S. 1898 B, p. 358.

Wortman, J. L. 1893 A.

1898 A, pp. 110, 136.

Zittel, K. A. 1893 B, p. 362.

Poebrotherium eximium sp. nov.

Wortman, J. L. 1898 A, p. 111, fig. 7. (P. wilsoni, not of Leidy.)
 Oligocene (White River); South Dakota.

Poebrotherium labiatum¹ Cope.

Cope, E. D. 1881 I, p. 271, fig. 4.
 1881 J, p. 544, fig. 4.
 1886 C, p. 618, fig. 7.
 1887 S, p. 271, fig. 4.
 Matthew, W. D. 1899 A, p. 60.

¹Trouessart refers to Bull. U.S. Geog. and Geol. Survey, vol. i, p. 26, as the place of original description of this species; but it is not mentioned there. Cope's reference to "Hayden iv, pl. cxv," is to an unpublished work.

- Roger, O. 1896 A, p. 216.
 Scott, W. B. 1891 A, pl. i, fig. 7; pl. ii, figs. 11-39; pl. iii, figs. 40-42, 48-51.
 Trouessart, E. L. 1898 A, p. 840.
 Wortman, J. L. 1898 A, p. 113, pl. xi, figs. C, D.
 Zittel, K. A. 1893 B, pp. 359, 362, fig. 292.
 Oligocene (White River); Colorado, South Dakota.

Poebrotherium wilsoni Leidy.

- Leidy, J. 1847 B, p. 322.
 Cope, E. D. 1874 B, p. 500.
 1874 P, p. 24.
 1886 C, p. 618, figs. 3, 9.
 1889 G, 114, fig. 12. (P. wilsoni.)
 Hayden, F. V. 1858 B, p. 157.
 King, C. 1878 A, p. 411.
 Leidy, J. 1848 A.
 1852 J, p. 571. (Poebrotherium.)

PROTOMERYX Leidy.

- Leidy, J. 1856 J, p. 163.
 Cope, E. D. 1886 C, p. 618 (Gomphotherium, type *G. sternbergii*; preoccupied by Gomphotherium Burmeister).
 Leidy, J. 1869 A, p. 160.
 1871 C, p. 340.
 Nicholson and Lydekker 1889 A, p. 1334. (Gomphotherium.)
 Scott, W. B. 1891 A. (Protomeryx, Gomphotherium.)
 1899 A, pp. 17, 46, 113. (Gomphotherium.)
 Wilckens, M. 1885 C, p. 421.
 Wortman, J. L. 1898 A, pp. 114, 137. (Gomphotherium.)
 Zittel, K. A. 1893 B, p. 362. (Gomphotherium.)
 In case future discoveries shall prove that Cope's *Gomphotherium sternbergii* is generically different from Leidy's *Protomeryx halli* a new generic name must replace *Gomphotherium*.

Protomeryx cameloides (Wort.)

- Wortman, J. L. 1898 A, p. 115, pl. xi, fig. F; text figs. 15-19. (Gomphotherium.)
 Douglass, E. 1900 A, p. 14. (Gomphotherium.)
 Matthew, W. D. 1899 A, p. 64.
 Trouessart, E. L. 1899 A, p. 1349. (Gomphotherium.)
 Miocene (John Day); Oregon.

Protomeryx halli Leidy.

- Leidy, J. 1856 J, p. 163.

- Leidy, J. 1852 L, p. 64. (Poeluotherium, misprint.)
 1854 A, p. 19, pl. i, figs. 1-4.
 1854 E, p. 157.
 1869 A, pp. 141, 381, pl. xiii, figs. 5-7. (Poebrotherium.)
 1871 C, p. 350.
 Matthew, W. D. 1899 A, p. 61.
 Roger, O. 1896 A, p. 216.
 Scott, W. B. 1890 A, p. 483.
 1891 A, pl. i, figs. 1-3, 8, 9; pl. ii, fig. 1: pl. iii, figs. 44-47.
 Trouessart, E. L. 1898 A, p. 840.
 Wilckens, M. 1885 C, p. 419.
 Wortman, J. L. 1898 A, p. 111, figs. 8-10; pl. xi, fig. B.
 Zittel, K. A. 1893 B, p. 362, fig. 294.
 Oligocene (White River); South Dakota, Nebraska.

Type *P. halli* Leidy.

- Cope, E. D. 1874 P, p. 23. (Poebrotherium.)
 Hayden, F. V. 1858 B, p. 157.
 King, C. 1878 A, p. 411.
 Leidy, J. 1869 A, pp. 160, 382, pl. xv, figs. 8, 9.
 1871 C, p. 351.
 Matthew, W. D. 1899 A, p. 61.
 Roger, O. 1896 A, p. 216.
 Trouessart, E. L. 1898 A, p. 841.
 Oligocene (White River); South Dakota, Colorado.

Protomeryx serus (Douglass).

- Douglass, E. 1900, p. 12, pl. i, fig. 1. (Gomphotherium.)
 Miocene; Montana.

Protomeryx sternbergii (Cope.)

- Cope, E. D. 1879 B, p. 59. (Poebrotherium.)
 1884 H, p. 25. (Poebrotherium.)
 1885 B, p. 486. (Poebrotherium.)
 1886 C, p. 618, fig. 10. (Gomphotherium.)
 Matthew, W. D. 1899 A, p. 64. (Protomeryx.)
 Roger, O. 1896 A, p. 216. (Gomphotherium.)
 Trouessart, E. L. 1898 A, p. 840. (Gomphotherium.)
 Wortman, J. L. 1898 A, p. 115, pl. xi, fig. E; text figs. 11-14.
 Zittel, K. A. 1893 B, p. 362, fig. 295. (Gomphotherium.)
 Miocene (John Day); Oregon.

MIOLABINÆ nom. nov.

- Cope, E. D. 1884 G, p. 16. (Protolabidæ.)
 1886 C, p. 613. (Protolabidæ.)
 1887 B, pp. 379, 391. (Protolabidæ.)
 1888 X, p. 1080. (Protolabidæ.)

- Roger, O. 1896 A, p. 217. (Protolabinae.)
 Trouessart, E. L. 1898 A, p. 841. (Protolabinae.)
 Zittel, K. A. 1893 B, p. 363. (Protolabinae.)

MIOLABIS Hay. Type *Protolabis transmontanus* Cope.

- Hay, O. P. in Matthew, W. D. 1899 A, pp. 24, 74.
 1899 A, p. 593.
 Matthew, W. D. 1899 A, pp. 24, 74.
 Wortman, J. L. 1898 A, p. 120. (Protolabis.)

Miolabis transmontanus (Cope).

- Cope, E. D. 1879 B, p. 67. (Protolabis.)
 1879 N, p. 131. (Protolabis.)
 1886 B, p. 359. (Protolabis.)

- Cope, E. D. 1886 C, p. 620, fig. 11. (Protolabis.)
 1886 H. (Protolabis.)
 1887 S. p. 223, fig. 13. (Protolabis.)
 Hay, O. P. 1899 A, p. 593.
 Matthew, W. D. 1899 A, p. 74.

- Roger, O. 1896 A, p. 216. (Protolabis.)
 Trouessart, E. L. 1898 A, p. 841. (Protolabis.)
 Wortman, J. L. 1898 A, p. 122. (Protolabis.)
 Zittel, K. A. 1893 B, p. 363, fig. 296. (Protolabis.)
 Miocene (Loup Fork); Oregon.

PROCAMELUS Leidy. Type *P. occidentalis* Leidy.

- Leidy, J. 1858 E, p. 23.
 Baur, G. 1885 I.
 Branco, W. 1897 A, p. 24.
 Cope, E. D. 1873 R, p. 420.
 1874 P, p. 20.
 1875 F, p. 75.
 1875 Q, p. 262.
 1876 G, p. 144. (Procamelus; Protolabis, type *P. heterodontus*.)
 1877 K, p. 325. (Procamelus, Protolabis.)
 1884 G, p. 16.
 1886 C, p. 612 (Procamelus); p. 613 (Protolabis).
 1887 B, p. 391 (Protolabis); p. 393 (Procamelus).
 1889 C.
 1893 A, p. 36.
 Gaudry, A. 1878 B, p. 123.
 Leidy, J. 1889 A, p. 147 (Procamelus); p. 158 (Homocamelus, type *H. caninus*).
 1871 C, p. 350. (Homocamelus.)
 1873 A, p. 312. (Protocamelus.)
 1873 B, p. 258 (Procamelus, or Protocamelus).
 1873 C, p. 15. (Protocamelus.)
 Marsh, O. C. 1877 E.
 Nicholson and Lydekker 1889 A, p. 1334. (Procamelus, Protolabis.)
 Osborn, Scott, and Spier 1878 A, pl. x, fig. 6. (Protolabis.)
 Schlosser, M. 1886 B, p. 48 (Procamelus, Protolabis); p. 49 (Homocamelus).
 Scott, W. B. 1891 A, p. 49 (Procamelus, Protolabis); p. 50 (Homocamelus).
 1891 D, p. 90. (Procamelus, Protolabis.)
 1892 A, p. 436.
 1895 C, p. 179. (Protolabis.)
 Steinmann and Döderlein 1890 A, p. 800 (Protolabis); p. 801 (Procamelus).
 Wilckens M. 1885 C, p. 421 (Procamelus); p. 424 (Homocamelus).
 Woodward, A. S. 1898 B, p. 359.
 Wortman, J. L. 1898 A, pp. 120, 122, 139.
 Zittel, K. A. 1893 B, p. 363. (Protolabis, Procamelus.)

Procamelus altus Marsh.

- Marsh, O. C. 1894 L, p. 274, figs. 33, 34.
 Cope, E. D. 1894 E, p. 869. ("Procamelus.")
 Matthew, W. D. 1899 A, p. 73. (Syn. of *P. robustus*.)
 Roger, O. 1896 A, p. 216.
 Trouessart, E. L. 1898 A, p. 841.
 Miocene; Oregon, Colorado.

Procamelus angustidens Cope.

- Cope, E. D. 1874 P, p. 20.
 1874 B, p. 529.
 1877 K, p. 327.

- Cope, E. D. 1893 A, p. 37.
 Matthew, W. D. 1899 A, p. 74.
 Roger, O. 1896 A, p. 216.
 Scott, W. B. 1891 A, p. 57, pl. i, fig. 6.
 Trouessart, E. L. 1898 A, p. 842.
 Wortman, J. L. 1898 A, p. 124. (Syn. of *P. occidentalis*.)
 Miocene (Loup Fork); Colorado, Kansas.

Procamelus fissidens Cope.

- Cope, E. D. 1876 G, p. 145.
 1877 K, p. 327.
 1893 A, p. 37.
 Matthew, W. D. 1899 A, p. 74. (Miolabis?).
 Roger, O. 1896 A, p. 216.
 Trouessart, E. L. 1898 A, p. 841.
 Wilckens, M. 1885 C, p. 423.
 Miocene (Loup Fork); Colorado.

Procamelus gracilis Leidy.

- Leidy, J. 1858 F, p. 89.
 Cope, E. D. 1875 F, p. 70.
 1877 K, p. 328 (*P. gracilis*); p. 329, pl. liii, fig. 2; pl. lxxvi; pl. lxxvii, figs. 1-3; pl. lxxviii, figs. 1-9; pl. lxxix (*P. occidentalis*, *fide* Cope 1893 A, p. 37.)
 1893 A, p. 37.
 Hayden, F. V. 1858 B, p. 157.
 Leidy, J. 1869 A, pp. 155, 382, pl. xiv, fig. 15.
 1871 C, p. 350.
 1873 A, p. 312. (Protocamelus.)
 1873 C, p. 15. (Protocamelus.)
 Leidy and Lucas 1891 A, p. 54.
 Matthew, W. D. 1899 A, p. 73.
 Trouessart, E. L. 1898 A, p. 841.
 Wilckens, M. 1885 C, p. 422.
 Wortman, J. L. 1898 A, p. 124, fig. 20.
 Miocene (Loup Fork); Nebraska, New Mexico, Texas.

Procamelus heterodontus Cope.

- Cope, E. D. 1873 R, p. 420.
 1871 B, p. 530.
 1874 P, p. 20.
 1876 G, p. 145. (Protolabis.)
 1877 K, p. 325.
 1879 B, p. 68. (Protolabis.)
 1886 C, p. 620, fig. 11.
 Hay, O. P. 1899 A, p. 593.
 Matthew, W. D. 1899 A, p. 74. (Protolabis.)
 Roger, O. 1896 A, p. 216.
 Trouessart, E. L. 1898 A, p. 841. (Protolabis.)
 Wilckens, M. 1885 C, p. 422.
 Wortman, J. L. 1898 A, pp. 120, 123. (Syn. of *P. robustus*.)
 Miocene (Loup Fork); Colorado.

Procamelus lacustris Douglass.

- Douglass, E. 1900 A, p. 18, pl. i, fig. 2.
 Miocene; Montana.

Procamelus leptognathus Cope.

- Cope*, E. D. 1893 A, p. 37.
 Matthew, W. D. 1899 A, p. 73.
 Roger, O. 1896 A, p. 216.
 Trouessart, E. L. 1898 A, p. 842.
 Miocene (Loup Fork); Texas.

Procamelus madisonius Douglass.

- Douglass*, E. 1900 A, p. 15, pl. ii.
 Miocene; Montana.

Procamelus major (Leidy).

- Leidy*, J. 1886 B, p. 11. (Auchenia.)
Cope, E. D. 1892 AA. (Pliauchenia.)
Leidy, J. 1887 A. (Auchenia.)
 1889 A. (Auchenia.)
 1892 A. (Auchenia.)
Leidy and Lucas 1896 A, pp. viii, 53; pl. xv, fig. 9;
 pl. xvii, figs. 1-16; pl. xviii, figs. 1-4.
Roger, O. 1896 A, p. 219. (Auchenia.)
Trouessart, E. L. 1898 A, p. 845. (Lama.)
 Pliocene; Florida.

Procamelus minimus (Leidy).

- Leidy*, J. 1886 B, p. 11. (Auchenia.)
Cope, E. D. 1892 AA. (Auchenia.)
Leidy, J. 1889 D, p. 17, pl. iii, fig. 5. (Auchenia.)
 1892 A. (Auchenia.)
Leidy and Lucas 1896 A, pp. viii, 53, pl. xvi, figs. 1-4.
Roger, O. 1896 A, p. 218. (Auchenia.)
Trouessart, E. L. 1898 A, p. 845. (Lama.)
 Pliocene; Florida.

Procamelus minor (Leidy).

- Leidy*, J. 1886 B, p. 12. (Auchenia.)
Cope, E. D. 1892 AA. (Pliauchenia media.)
Leidy, J. 1889 A. (Auchenia.)
 1892 A. (Auchenia.)
Leidy and Lucas 1896 A, pp. viii, 53, pl. xv, fig. 10;
 pl. xvii, figs. 17, 18; pl. xviii, figs. 5, 6. (P.
 medius, error for P. minor.)
Roger, O. 1896 A, p. 218. (Auchenia.)
Trouessart, E. L. 1898 A, p. 846. (Lama.)
 Pliocene; Florida.

Procamelus montanus (Douglass).

- Douglass*, E. 1900 A, p. 13, pl. iii. (Protolabis.)
 Miocene; Montana.

Procamelus occidentalis Leidy.

- Leidy*, J. 1858 E, p. 23.
 Baur, G. 1885 I.
Cope, E. D. 1874 B, p. 531.
 1874 P, p. 22.
 1875 F, p. 70, pl. ii.
 1876 G, pp. 144, 146.
 1877 K, p. 329, pl. liii, fig. 2; pl. lxxvi; pl.
 lxxvii, figs. 1-3; pl. lxxviii, figs. 1-9; pl.
 lxxix.
 1877 M.

- Cope*, E. D. 1881 J, p. 547, fig. 9.
 1886 C, p. 621, figs. 2, 12, 14.
 1887 S, p. 223, fig. 14.
 1889 G, p. 114, fig. 10.
 1893 A, p. 37.
Hayden, F. V. 1858 B, p. 157.
Leidy, J. 1869 A, pp. 151, 382, pl. ix, fig. 5; pl. xv,
 figs. 5-7 (P. occidentalis); pp. 158, 382, pl. xiv,
 figs. 16, 17 (Homocamelus caninus).
 1871 C, p. 350. (P. occidentalis, Homocamelus
 caninus.)
 1873 A, p. 312. (Protocamelus.)
 1873 B, pp. 258, 317, pl. xx.
 1873 C, p. 15. (Protocamelus.)
Matthew, W. D. 1899 A, p. 73.
Osborn, Scott, and *Speir* 1878 A, pl. x, fig. 5.
Owen, R. 1870 C, p. 74.
Roger, O. 1896 A, p. 216 (P. occidentalis); p. 217
 (Homocamelus caninus).
Scott, W. B. 1891 A, pp. 51, 57, pl. i, figs. 4, 5; pl.
 iii, fig. 52.
Trouessart, E. L. 1898 A, p. 841 (P. occidentalis).
 p. 842 (Homocamelus caninus).
Wilckens, M. 1885 C, p. 422 (P. occidentalis); p.
 424 (Homocamelus caninus).
Woodward, A. S. 1893 B, p. 359, fig. 205.
Wortman, J. L. 1898 A, pp. 116, 123, 124, pl. xi,
 fig. G.
Zittel, K. A. 1893 B, p. 363, fig. 279.
 Miocene (Loup Fork); South Dakota, Nebraska,
 New Mexico, Texas.

Procamelus robustus Leidy.

- Leidy*, J. 1858 F, p. 89.
Cope, E. D. 1881 C, p. 175. (Protolabis prehensilis.)
 1893 A, p. 37.
Hay, O. P. 1899 A, p. 593.
Hayden, F. V. 1858 B, p. 157.
King, C. 1878 A, p. 430.
Leidy, J. 1869 A, pp. 148, 381, pl. xv, figs. 1-4.
 1871 C, p. 350.
 1873 B, pp. 258, 317.
Matthew, W. D. 1899 A, p. 73.
Roger, O. 1896 A, p. 216. (Protolabis robustus,
 P. prehensilis.)
Trouessart, E. L. 1898 A, p. 841.
Wilckens, M. 1885 C, p. 423.
Wortman, J. L. 1898 A, pp. 120, 123.
 Miocene (Loup Fork); Nebraska, Kansas,
 Texas, New Mexico.

Procamelus virginianensis Leidy.

- Leidy*, J. 1873 C, p. 15. (Protocamelus.)
 1873 A, p. 311. (Protocamelus.)
 1873 B, pp. 259, 317, pl. xxvii, figs. 26-29.
Roger, O. 1896 A, p. 216.
Trouessart, E. L. 1898 A, p. 842.
Wilckens, M. 1885 C, p. 422.
 Miocene; Virginia.

¹ This description and the accompanying figures are referred later by Professor Cope to *P. gracilis*.
 Dr. Wortman (1898 A, p. 124) appears to regard the New Mexican specimens as *P. occidentalis*.

CAMELOPS Leidy. Type *C. kansanus* Leidy.*Leidy, J.* 1854 F, p. 172.Cope, E. D. 1884 G, p. 16. (*Holomeniscus*, type *Auchenia hesternus*.)1886 C, p. 621. (*Holomeniscus*.)1887 B, p. 392. (*Holomeniscus*.)Cragin, F. W. 1892 A, p. 257. (*Holomeniscus*.)Leidy, J. 1858 E, p. 24. (*Megalomeryx*, type *M. niobrarensis*.)1871 C, p. 349 (*Camelops*); p. 351 (*Megalomeryx*).Scott, W. B. 1891 A, p. 52. (*Holomeniscus*.)1892 A, p. 436. (*Holomeniscus*.)Steinmann and Döderlein 1890 A, p. 801. (*Holomeniscus*.)Whitney, J. D. 1879 A, p. 250. (*Megalomeryx*.)Wilckens, M. 1885 C, p. 425. (*Megalomeryx*.)

Wortman, J. L. 1898 A, p. 128.

Zittel, K. A. 1893 B, p. 364 (*Camelops*); p. 365 (*Holomeniscus*).**Camelops californicus (Leidy).***Leidy, J.* 1870 T, p. 126. (*Auchenia*.)Bowers, S. 1889 A, p. 391. (*Holomeniscus*.)Cope, E. D. 1884 G, p. 18. (*Auchenia*.)Cragin, F. W. 1892 A, p. 257. (*Auchenia*.)Leidy, J. 1871 C, p. 349. (*Auchenia*.)1873 B, p. 255. (*Auchenia*.)Roger, O. 1896 A, p. 217. (*Holomeniscus*.)Trouessart, E. L. 1898 A, p. 843. (Subsp. of *Holomeniscus hesternus*.)Whitney, J. D. 1879 A, p. 248. (*Auchenia*.)Wilckens, M. 1885 C, p. 431. (*Auchenia*.)Zittel, K. A. 1893 B, p. 365. (*Holomeniscus*.)

Pleistocene; California.

Camelops hesternus (Leidy).*Leidy, J.* 1873 F. (*Auchenia*.)Cope, E. D. 1884 G, p. 17. (*Holomeniscus*.)1889 F. (*Holomeniscus*.)1889 S, pp. 978, 980. (*Holomeniscus*.)1892 E, p. 251. (*Holomeniscus*.)Cragin, F. W. 1892 A, p. 257. (*Auchenia*.)Dana, J. D. 1879 A, p. 233. (*Auchenia*.)Leidy, J. 1873 B, pp. 255, 317, pl. xxxvii, figs. 1-3. (*Auchenia*.)Roger, O. 1896 A, p. 217. (*Holomeniscus*.)Trouessart, E. L. 1898 A, p. 843. (*Holomeniscus*.)Whitney, J. D. 1879 A, p. 250. (*Auchenia*.)Wilckens, M. 1885 C, p. 431. (*Auchenia*.)Wortman, J. L. 1898 A, p. 130. (Syn. of *Camelops kansanus*.)Yates, L. G. 1874 B, p. 18. (*Auchenia*.)

Pleistocene; California, Oregon, Mexico.

From this species the Texan and New Mexican specimens are excluded. Not improbably the species is identical with *C. kansanus*.

Camelops kansanus Leidy.*Leidy, J.* 1854 F, p. 172.Cope, E. D. 1893 A, p. 72 (*Auchenia huerfanensis*); p. 84, pl. xxiii, fig. 4 (*Holomeniscus sulcatus*).Cragin, F. W. 1892 A, p. 258. (*Auchenia huerfanensis*.)1896 A, p. 53. (*A. huerfanensis*.)Hayden, F. V. 1858 B, p. 157. (*Megalomeryx niobrarensis*.)King, C. 1878 A, p. 430. (*Megalomeryx niobrarensis*.)

Leidy, J. 1856 T, p. 166, pl. xvii, figs. 8-10.

1858 E, p. 24. (*Megalomeryx niobrarensis*.)1869 A, p. 382 (*C. kansanus*); pp. 161, 382, pl. xiv, figs. 12-14 (*Megalomeryx niobrarensis*).1871 C, p. 349 (*C. kansanus*); p. 351 (*Megalomeryx niobrarensis*.)1873 B, p. 260, pl. xxvii, figs. 24, 25 (*Megalomeryx niobrarensis?*); p. 317 (*Procamelus? niobrarensis*).

Owen, R. 1870 C, p. 75.

Roger, O. 1896 A, p. 216 (*Procamelus niobrarensis*); p. 217 (*Camelops kansanus*, *Holomeniscus sulcatus*); p. 218 (*Auchenia huerfanensis*).Trouessart, E. L. 1898 A, p. 842 (*C. kansanus*); p. 845 (*Lama huerfanensis*).

Wilckens, M. 1885 C, p. 425.

Williston, S. W. 1897 I, p. 303 (*C. kansanus*); p. 304 (*Auchenia huerfanensis*).1898 I, p. 92. (*Auchenia kansanus*, *A. huerfanensis*.)

Wortman, J. L. 1898 A, p. 130.

Pleistocene; Kansas.

Camelops macrocephalus (Cope).*Cope, E. D.* 1893 A, p. 85, pl. xxiii, fig. 5. (*Holomeniscus*.)Roger, O. 1896 A, p. 217. (*Holomeniscus*.)Trouessart, E. L. 1898 A, p. 843. (*Holomeniscus*.)Pliocene (*Equus* beds); Texas.**Camelops vitakerianus (Cope).***Cope, E. D.* 1878 H, p. 380. (*Auchenia*.)1884 G, p. 17. (*Holomeniscus*.)1889 F. (*Holomeniscus*.)1889 S, pp. 978, 980. (*Holomeniscus*.)1893 A, p. 86. (*Holomeniscus*.)Roger, O. 1896 A, p. 217. (*Holomeniscus*.)Trouessart, E. L. 1898 A, p. 843. (*Holomeniscus*.)

Wortman, J. L. 1898 A, p. 132.

Pliocene; Oregon.

PLIAUCHENIA Cope. Type *P. humphreysiana* Cope.*Cope, E. D.* 1875 P, p. 258.

1875 F, pp. 69, 75.

1875 Q, p. 262.

1876 G.

1877 K, p. 340.

Cope, E. D. 1886 C, p. 612.

1887 B, p. 392.

1893 A, p. 70.

Flower and Lydekker 1891 A, p. 304.

Nicholson and Lydekker 1889 A, p. 1334.

- Schlosser, M. 1886 B, p. 49.
 Scott, W. B. 1891 A, p. 51.
 Wilckens, M. 1885 C, p. 428.
 Wortman, J. L. 1898 A, p. 126.
 Zittel, K. A. 1893 B, p. 364.

Pliauchenia humphreysiana Cope.

- Cope, E. D.* 1875 P, p. 258.
 1875 F, p. 69.
 1877 K, p. 344, pl. lxxvii, fig. 4.
 1886 C, p. 621.
 1892 AA.
 Matthew, W. D. 1899 A, p. 74.
 Roger, O. 1896 A, p. 217.
 Trouessart, E. L. 1898 A, p. 842. (P. humphresiana.)
 Wilckens, M. 1885 C, p. 430.
 Wortman, J. L. 1898 A, p. 127. (P. humphresiana.)
 Zittel, K. A. 1893 B, p. 364. (P. humphriesiana.)
 Miocene (Loup Fork); New Mexico, Kansas.

Pliauchenia minima Wort.

- Wortman, J. L.* 1898 A, p. 127.
 Matthew, W. D. 1899 A, p. 74.
 Miocene (Loup Fork); Kansas.

Pliauchenia spatula Cope.

- Cope, E. D.* 1893 A, p. 70, pl. xxi, figs. 1, 2.
 Matthew, W. D. 1899 A, p. 75.
 Roger, O. 1896 A, p. 217.
 Trouessart, E. L. 1898 A, p. 842.
 Wortman, J. L. 1898 A, p. 127.
 Pliocene (Blanco); Texas.

Pliauchenia vulcanorum Cope.

- Cope, E. D.* 1875 P, p. 259.
 1875 F, p. 70.
 1877 K, p. 345, pl. lxxvii, fig. 5.
 1892 AA.
 Matthew, W. D. 1899 A, p. 74.
 Roger, O. 1896 A, p. 217.
 Trouessart, E. L. 1898 A, p. 842.
 Wilckens, M. 1885 C, p. 430.
 Wortman, J. L. 1898 A, p. 127.
 Miocene (Loup Fork); New Mexico.
 As Dr. Wortman has pointed out, the generic position of this species is doubtful.

CAMELINÆ.

- Cope, E. D.* 1887 B, pp. 379, 394. (Eschatiidæ.)
 1888 X, p. 1080. (Eschatiidæ.)
 Roger, O. 1896 A, p. 217.

- Trouessart, E. L. 1898 A, p. 843.
 Zittel, K. A. 1893 B, p. 364.

ESCHATIUS Cope. Type *E. cinidens* Cope.

- Cope, E. D.* 1884 G, pp. 16, 18.
 1886 C, p. 622.
 1891 L, p. 1118.
 Nicholson and Lydekker 1889 A, p. 1335.
 Scott, W. B. 1891 A, p. 52.
 1892 A, p. 436.
 Steinmann and Döderlein 1890 A, p. 801.
 Zittel, K. A. 1893 B, p. 365.

Eschatus cinidens Cope.

- Cope, E. D.* 1884 G, p. 19.
 1889 F.
 1889 S, pp. 978, 980.

- Roger, O. 1896 A, p. 217.
 Trouessart, E. L. 1898 A, p. 843.
 Wortman, J. L. 1898 A, p. 134.
 Pliocene; Oregon, Mexico.

Eschatus longirostris Cope.

- Cope, E. D.* 1884 G, p. 20.
 1889 F.
 1889 S, pp. 978, 980.
 Roger, O. 1896 A, p. 217.
 Trouessart, E. L. 1898 A, p. 843.
 Wortman, J. L. 1898 A, p. 135.
 Pliocene; Oregon.

CAMELUS Linn. Type *C. dromedarius* Linn.

- Linnaeus, C.*, 1758, Syst. Nat., ed. 10, i, p. 65.
 Baur, G. 1885 I, p. 196.
 Blainville, H. M. D. 1864 A, iv, CC, p. 61, pls. i-v.
 Cope, E. D. 1886 C, p. 612.
 Flower and Lydekker 1891 A, p. 296.
 Lydekker, R. 1885 C, p. 139.
 Nicholson and Lydekker 1889 A, p., 1335.
 Owen, R. 1866 B, p. 470, figs. 307, 318.
 1868 A, p. 349, fig. 278.
 Paulli, S. 1900 A, p. 203.

- Roger, O. 1896 A, p. 219.
 Scott, W. B. 1891 A.
 Trouessart, E. L. 1898 A, p. 846.
 Woodward, A. S. 1898 B, p. 360.
 Zittel, K. A. 1893 B, p. 364.

Camelus americanus Wort.

- Wortman, J. L.* 1898 A, p. 133, fig. 2.
 Trouessart, E. L. 1899 A, p. 1349.
 Pleistocene; Nebraska.

TELEOPTERNUS Cope. Type *T. orientalis* Cope.

- Cope, E. D.* 1899 A, p. 263.

Professor Cope expressed himself as being unable to determine whether this genus was a camelid or a cervid.

Teleopternus orientalis Cope.

- Cope, E. D.* 1899 A, p. 264, pl. xxi, figs. 4, 4a.
 Pleistocene; Pennsylvania.

Superfamily TRAGULOIDEA.

Citations to the literature of this superfamily and of the family Tragulidæ are here presented because by some authors the Leptomerycinæ, here placed in the Cameloidea, have been assigned to the Tragulidæ and may yet be retained there. Unless otherwise indicated, the following authors use the name Tragulina in referring to this group.

Cope, E. D. 1885 B.

Flower, W. H. 1874 A.

Flower, W. H. 1885 A.

Flower and Lydekker 1891 A, p. 305.

Gill, T. 1872 B, pp. 9, 73, 80. (Traguloidea.)

Osborn and Wortman 1892 B, p. 370.

Rütimeyer, L. 1867 B.

1877 A, p. 21.

1878 A, p. 21.

1883 A, p. 15.

1884 A, p. 403.

Scott, W. B. 1892 A, p. 436.

TRAGULIDÆ.

Boas, J. E. V. 1890 A.

Branco W. 1897 A, p. 25.

Cope, E. D. 1884 H, p. 27.

1887 B, pp. 379, 388.

1888 X, p. 1081.

1889 G, p. 120.

Edwards, A. M. 1864 A.

Flower, W. H. 1873 A.

Flower and Lydekker 1889 A, p. 305.

Gill, T. 1872 B, pp. 9, 73, 80.

Gray, J. E. 1869 C.

Huxley, T. H. 1870 A, p. 439.

1872 A, p. 326.

Kowalevsky, W. 1873 A, p. 186.

Lydekker, R. 1885 C, p. 150.

1896 B, p. 164.

Nicholson and Lydekker 1889 A, p. 1333.

Osborn and Wortman 1892 B, p. 370.

Roger, O. 1896 A, p. 224.

Schlosser, M. 1886 A, p. 254.

1886 B, p. 72.

Scott, W. B. 1890 B, p. 388.

Steinmann and Döderlein 1890 A, p. 802.

Trouessart, E. L. 1898 A, p. 857.

Woodward, A. S. 1898 B, p. 360.

Zittel, K. A. 1893 B, p. 381.

Superfamily BOÖIDEA.

Boas, J. E. V. 1890 A. (Ruminantia.)

Brandt, E. 1888 A. (Ruminantia.)

Cope, E. D. 1884 H, p. 27. (Selenodonta.)

1884 DD. (Selenodonta.)

1885 B, p. 483. (Selenodonta.)

1887 B, p. 304 (Pecora); p. 378 (Selenodonta.)

1898 B, p. 130. (Boöidea.)

Cuvier, G. 1834 A, vi. (Ruminantia.)

Flower, W. H. 1873 A. (Ruminantia.)

1874 A. (Pecora.)

1883 D, p. 430. (Pecora.)

1885 A. (Pecora.)

Flower and Lydekker 1891 A, p. 307. (Pecora.)

Gaudry, A. 1878 B, p. 77. ("Les Ruminants.")

Gill, T. 1872 B, pp. 9, 76.

Grüber, W. 1859 A. (Ruminantia.)

Huxley, T. H. 1872 A, p. 322. (Ruminantia.)

Kowalevsky, W. 1873 A, p. 171. (Selenodonta.)

1874 A. (Ruminantia.)

Lydekker, R. 1883 A. (Ruminantia.)

Marsh, O. C. 1877 E. (Selenodonta.)

Mayo, F. 1888 A. (Ruminantia.)

Mettam, A. E. 1895 A. (Ruminantia.)

Osborn and Wortman 1892 B, p. 370. (Pecora.)

Owen, R. 1845 B, p. 527. (Ruminantia.)

1857 A. (Ruminantia.)

Parker, W. K. 1885 A, p. 201.

Roger, O. 1889 A. (Ruminantia.)

Rütimeyer, L. 1862 A, p. 603. (Ruminantia.)

1865 A.

1867 B.

1868 A.

1884 A, p. 425. (Selenodonta.)

Schlosser, M. 1889 A.

Schmidt, O. 1886 A, p. 150 (Ruminantia); p. 173 (Cavicornia).

Scott, W. B. 1899 A, p. 118. (Pecora.)

Steinmann and Döderlein 1890 A, p. 797.

Turner, H. N. 1848 A.

Zittel, K. A. 1893 B, p. 413. (Cavicornia.)

CERVIDÆ.

Ameghino, F. 1889 A, p. 599.

Baird, S. F. 1857 A, p. 629.

Baur, G. 1884 F, p. 599.

Branco, W. 1897 A, p. 25. (Cervicornia.)

Brandt, E. 1888 A.

Brooke, V. 1878 A, p. 883.

Cope, E. D. 1887 B, pp. 379, 394, 398.

1888 X, p. 1081.

1889 G, p. 124.

Cope and Wortman 1884 A, p. 22.

Coues, E. 1878 B.

Cuvier, G. 1834 A, vi, p. 43, plates.

Flower, W. H. 1873 A.

Flower, W. H. 1874 A.

1883 D, p. 431.

1885 A.

Flower and Lydekker 1891 A, p. 31.

Gill, T. 1872 B, pp. 9, 73.

Leidy, J. 1871 C, p. 351.

Leuthardt, F. 1891 A, p. 126.

Lydekker, R. 1885 C, p. 73.

Lydekker, R. 1896 B, p. 164.

1898 A.

Marsh, O. C. 1877 E.

Nicholson and Lydekker 1889 A, p. 1336.

Nitsche, H. 1899 A.

Owen, R. 1866 B.
 Pohlig, H. 1892 A.
 Roger, O. 1887 A.
 Rüttimeyer, L. 1867 B. (Cervicornia.)
 1877 A.
 1878 A, p. 25.
 1881 A.
 1882 A.

Rüttimeyer, L. 1883 A, p. 20.
 Schmidt, O. 1886 A, p. 158.
 Steinmann and Döderlein 1890 A, p. 804.
 Trouessart, E. L. 1898 A, p. 864.
 Weyhe, —, 1875 A, p. 118.
 Woodward, A. S. 1898 B, p. 363.
 Zittel, K. A. 1893 B, p. 390. (Cervicornia.)

CERVULINÆ.

Brooke, V. 1874 A.
 Cope, E. D. 1887 B, pp. 394, 395. (Cosorycinae,
 Cosorycidae.)
 Flower, W. H. 1874 A.
 Roger, O. 1896 A, p. 227.
 Rüttimeyer, L. 1881 A, p. 23.

Rüttimeyer, L. 1882 A, p. 16. (Cervulina.)
 1884 A, p. 445.
 Steinmann and Döderlein 1890 A, p. 805.
 Trouessart, E. L. 1898 A, p. 865.
 Zittel, K. A. 1893 B. 395.

PALÆOMERYX Meyer. Types *P. bojani* and *P. kaupii*.

Meyer, H. 1834 A, p. 92.
 Blainville, H. M. D. 1864 A, iv, BB, p. 135.
 Depéret, C. 1887 A, p. 210.
 Douglass, E. 1900 A, p. 20.
 Flower and Lydekker, 1891 A, p. 330.
 Hofmann, A., 1888, Jahrb. k. k. geol. Reichsanst.,
 xxxviii, p. 551.
 Lydekker, R., 1883, Mem. Geol. Surv. India, ii, pp.
 173, 174. (Propalæomeryx.)
 Nicholson and Lydekker 1889 A, p. 1338.
 Pictet, F. J. 1853 A, p. 350.
 Rüttimeyer, L. 1883 A, p. 79.

Schlosser, M. 1886 C, p. 294.
 Steinmann and Döderlein 1890 A, p. 805.
 Trouessart, E. L. 1898 A, p. 867.
 Zittel, K. A. 1893 B, p. 397.

Palæomeryx americanus Douglass.

Douglass, E. 1900 A, p. 20, pl. iv, figs. 2, 3.
 Miocene (Loup Fork); Montana.

Palæomeryx madisonius Douglass.

Douglass, E. 1900 A, p. 23.
 Miocene (Loup Fork); Montana.

BLASTOMERYX Cope. Type *Merycodus gemmifer* Cope.

Cope, E. D. 1877 K, p. 350.
 1875 F, p. 68. (Dicrocerus, not of Lartet.)
 1875 O, p. 257. (Dicrocerus.)
 1878 C, p. 222.
 1884 H, p. 27.
 1885 B, p. 488.
 1887 B, p. 396.
 1889 C, p. 206.
 1889 G, p. 125.

Nicholson and Lydekker 1889 A, p. 1342.

Scott, W. B. 1891 D, p. 90.

1895 C, p. 167.

Scott and Osborn 1890 B, p. 76, figs. 7-9.

Zittel, K. A. 1893 B, p. 399.

Blastomeryx antilopinus Scott.

Scott, W. B. 1893 B, p. 662.

Matthew, W. D. 1899 A, p. 74.

Roger, O. 1896 A, p. 230.

Scott, W. B. 1895 C, p. 168, pl. vi, figs. 48-51.

Trouessart, E. L. 1898 A, p. 870.

 Miocene (Loup Fork); Montana.

Blastomeryx borealis Cope.

Cope, E. D. 1878 C, p. 222.

1878 H, p. 382.

1878 L, p. 58.

1884 DD, p. 1035.

1886 B, p. 359.

Cope, E. D. 1886 H.

1889 G, p. 123, figs. 16, 19.

Matthew, W. D. 1899 A, p. 74.

Roger, O. 1896 A, p. 230.

Scott, W. B. 1891 D, p. 91.

1893 B, p. 659.

1895 C, p. 168.

Trouessart, E. L. 1898 A, p. 870.

 Miocene (Loup Fork); Montana, Oregon.

Blastomeryx gemmifer Cope.

Cope, E. D. 1874 B, p. 531. (Merycodus.)

1874 P, p. 22. (Merycodus.)

1875 F, p. 68. (Dicrocerus.)

1875 O, p. 257. (Dicrocerus.)

1877 K, pp. 350, 360, pl. lxxxii, fig. 13.

 [Dicrocerus (Blastomeryx).]

1884 DD, p. 1035. (Cosoryx.)

1885 B, p. 488.

1893 A, p. 39.

Matthew, W. D. 1899 A, p. 74.

Roger, O. 1896 A, p. 230.

Scott and Osborn 1890 B, p. 76.

Trouessart, E. L. 1898 A, p. 870.

Wilckens, M. 1885 C, p. 425. (Cosoryx.)

Zittel, K. A. 1893 B, p. 399, fig. 330.

 Miocene (Loup Fork); Colorado, Texas?, New
 Mexico, Nebraska.

MERYCODUS Leidy. Type *M. necatus* Leidy.

Leidy, J. 1854 C, p. 90.

Cope, E. D. 1875 F, p. 69. (*Dicrocerus*, not of Lartet.)

1875 O. (*Dicrocerus*.)

1877 K, p. 346. (*Dicrocerus*.)

1879 A, p. 46. (*Procervulus*, *Merycodus*, and *Cosoryx*, "nomina nuda.")

1880 B, p. 46. (Syn. of *Procervulus* Gaudry.)

1884 H, p. 27. (*Cosoryx*.)

1884 Z, p. 718. (*Cosoryx*.)

1884 DD. (*Cosoryx*.)

1885 B, p. 488. (*Cosoryx*.)

1887 B, p. 396. (*Cosoryx*.)

1889 C. (*Cosoryx*.)

1889 G, p. 125. (*Cosoryx*.)

Hay, O. P. 1899 A, p. 594.

Hensel, R. 1859 A. (*Dicrocerus* Lartet, not of Cope.)

Leidy, J. 1858 E, p. 23. (*Merycodus*.)

1869 A, pp. 162, 382 (*Merycodus*); pp. 173, 383 (*Cosoryx*, type *C. furcatus*.)

1871 C, p. 350 (*Merycodus*); p. 351 (*Cosoryx*.)

1873 B, p. 318. (*Merycodus*.)

Marsh, O. C. 1877 E. (*Cosoryx*.)

Nicholson and Lydekker 1889 A, p. 1345. (*Cosoryx*.)

Rütimeyer, L. 1878 A, p. 90. (*Cosoryx*.)

Trouessart, E. L. 1898 A, p. 870. (*Cosoryx*.)

Wilckens, M. 1885 C, p. 425.

Zittel, K. A. 1893 B, p. 399. (*Cosoryx*.)

***Merycodus agilis* (Douglass).**

Douglass, E. 1900 A, p. 23, pl. iv, fig. 1. (*Cosoryx*.)
Miocene; Montana.

***Merycodus furcatus* (Leidy).**

Leidy, J. 1869 A, pp. 173, 383, pl. xxviii, fig. 8. (*Cosoryx*.)

Cope, E. D. 1874 I, p. 148. (*Cosoryx*.)

1875 O, p. 257. (*Dicrocerus*.)

1877 K, p. 350, pls. lxxx, lxxxi, fig. 1; pl. lxxxii, fig. 1. (*Dicrocerus*.)

1880 E, p. 141. (*Procervulus*.)

1881 J, p. 547, fig. 10. (*Cosoryx*.)

1887 S, p. 271, fig. 5.

1889 C. (*Cosoryx*.)

1889 G, p. 114, fig. 11. (*Cosoryx*.)

Dawkins, W. B. 1870 A, p. 232. (*Cosoryx*.)

King, C. 1878 A, p. 430. (*Cosoryx*.)

Leidy, J. 1871 C, p. 352. (*Cosoryx*.)

Matthew, W. D. 1899 A, p. 74. (*Cosoryx*.)

Roger, O. 1896 A, p. 230. (*Cosoryx*.)

Scott and Osborn 1890 B, p. 82, pl. i. (*Cosoryx*.)

Trouessart, E. L. 1898 A, p. 870. (*Cosoryx*.)

Zittel, K. A. 1893 B, p. 399, fig. 331. (*Cosoryx*.)

Miocene (Loup Fork); Nebraska, New Mexico.

***Merycodus necatus* Leidy.**

Leidy, J. 1854 C, p. 90. (*Merycodus*.)

Cope, E. D. 1875 F, p. 69. (*Dicrocerus*.)

1875 O, p. 257. (*Dicrocerus*.)

1877 K, pp. 350, 353, pl. lxxxii, figs. 2-6; pl. lxxxii, figs. 2, 3. (*Dicrocerus*.)

1880 E, p. 141. (*Procervulus*.)

1889 G, p. 128, fig. 18. (*Cosoryx*.)

Hayden, F. V. 1858 B, p. 157. (*M. necatus*, *Cervus warreni*.)

King, C. 1878 A, p. 430. (*Cervus warreni*, *M. necatus*.)

Leidy, J. 1854 E, p. 157.

1858 E, p. 23. (*M. necatus*, *Cervus warreni*.)

1869 A, pp. 162, 382, pl. xiv, figs. 9, 10 (*M. necatus*); pp. 172, 379, pl. xxvii, fig. 12 (*Cervus warreni*.)

1871 C, p. 350 (*M. necatus*); p. 351 (*Cervus warreni*.)

1873 B, p. 318.

Matthew, W. D. 1899 A, p. 74. (*Cosoryx*.)

Roger, O. 1896 A, p. 230.

Trouessart, E. L. 1898 A, p. 870.

Wilckens, M. 1885 C, p. 425.

Pliocene; South Dakota, Wyoming Nebraska, New Mexico.

***Merycodus ramosus* (Cope).**

Cope, E. D. 1874 I, p. 148, in part. (*Cosoryx*.)

1874 O, p. 16. (*Cosoryx*.)

1875 F, p. 69. (*Dicrocerus*.)

1875 O, p. 257. (*Dicrocerus*.)

1877 K, pp. 350, 356. (Syn., in part, of *Dicrocerus furcatus*.)

1880 E, p. 141. (*Procervulus*.)

1889 C, p. 205. (*Cosoryx*.)

1889 G, p. 128, fig. 18. (*Cosoryx*.)

Matthew, W. D. 1899 A, p. 74. (Syn. of *Cosoryx furcatus*.)

Trouessart, E. L. 1898 A, p. 870. (Syn. of *Cosoryx furcatus*.)

Pliocene; New Mexico.

***Merycodus tehuanus* (Cope).**

Cope, E. D. 1877 K, pp. 350, 359, pl. lxxxii, figs. 10-12. (*Dicrocerus*.)

Matthew, W. D. 1899 A, p. 74. (*Cosoryx*.)

Roger, O. 1896 A, p. 230. (*Cosoryx*.)

Trouessart, E. L. 1898 A, p. 870. (Syn. of *Cosoryx trilateralis*.)

Pliocene; New Mexico.

A doubtful species.

***Merycodus teres* (Cope).**

Cope, E. D. 1874 I, p. 148. (*Cosoryx*.)

1874 O, p. 16. (*Cosoryx*.)

1875 F, p. 69. (*Dicrocerus*.)

1875 O, p. 257. (*Dicrocerus*.)

1877 K, pp. 347, 356, pl. lxxxii, fig. 7; pl. lxxxii, fig. 6. (*Dicrocerus*.)

Matthew, W. D. 1899 A, p. 74. (*Cosoryx*.)

Roger, O. 1896 A, p. 230. (*Cosoryx*.)

Scott and Osborn 1890 B, p. 83. (*Cosoryx*.)

Trouessart, E. L. 1898 A, p. 870. (*Cosoryx*.)

Miocene (Loup Fork); New Mexico.

***Merycodus trilateralis* (Cope).**

Cope, E. D. 1877 K, p. 357, pl. lxxxii, fig. 8; pl. lxxxii, figs. 7-9. (*Dicrocerus*.)

Matthew, W. D. 1899 A, p. 74. (*Cosoryx*.)

Roger, O. 1896 A, p. 230. (*Cosoryx*.)

Scott and Osborn 1890 B, p. 83. (*Cosoryx*.)

Trouessart, E. L. 1898 A, p. 870. (*Cosoryx*.)

Miocene (Loup Fork); New Mexico.

CERVINÆ.

- Baird, S. F. 1857 A, p. 630.
 Flower and Lydekker 1891 A, p. 316.
 Gill, T. 1872 B, p. 9.
 Lydekker, R. 1898 A, p. 32.
 Nicholson and Lydekker 1889 A, p. 1342.
 Roger, O. 1887 A. (Cervina.)

- Roger, O. 1896 A, p. 230.
 Rüttimeyer, L. 1882 A, p. 22. (Cervina.)
 1883 A, p. 20. (Cervina.)
 1884 A, p. 408. (Cervina.)
 Steinmann and Döderlein 1890 A, p. 806.
 Zittel, K. A. 1893 B, p. 400.

DAMA Zimm. Type *D. virginiana* Zimm.

- Zimmermann, E.*, 1777, Zool. Geog., p. 532.
 Baird, S. F. 1857 A, p. 637. (Cervus, in part.)
 Cope, E. D. 1887 B, p. 398. (Cariacus.)
 1889 G, p. 132. (Cariacus.)
 Flower and Lydekker 1891 A, p. 329. (Cariacus.)
 Gray, J. E. 1850. (Cariacus.)
 Hensel, R. 1859 A, p. 257. (Cariacus.)
 Lydekker, R. 1885 C, p. 82. (Cervus.)
 1898 A, p. 243. (Mazama.)
 Nicholson and Lydekker, 1889 A, p. 1342. (Cariacus.)
 Rafinesque, C. 1832-33, Atlantic Jour., p. 109, figure. (Odocoileus.)
 Roger, O. 1887 A. (Cariacus.)
 1896 A, p. 230. (Cervus.)
 Rüttimeyer, L. 1881 A, p. 47. (Cariacus.)
 1882 A, p. 26. (Cariacus.)
 1884 A, p. 410. (Cariacus.)
 Zittel, K. A. 1893 B, p. 401. (Cariacus.)

Dama dolichopsis (Cope).

- Cope, E. D.* 1878 GG, p. 189. (Cariacus.)
 1878 H, p. 379. (Cariacus.)
 Cope and Wortman 1884 A, p. 22, pl. ii. (Cariacus.)
 Kindel, E. M. 1898 A, p. 485. (Cariacus.)
 Pleistocene; Indiana.

Dama ensifer (Cope).

- Cope, E. D.* 1889 F, p. 163. (Cariacus.)
 Roger, O. 1896 A, p. 232. (Cervus.)
 Trouessart, E. L. 1898 A, p. 892. (Cariacus.)
 Pleistocene (Equus beds); Oregon.

Dama lævicornis (Cope).

- Cope, E. D.* 1896 F, p. 393. (Cariacus.)
 1899 A, p. 265, pl. xxi, fig. 5. (Cariacus.)
 Trouessart, E. L. 1898 A, p. 892. (Cariacus.)
 Pleistocene; Pennsylvania.

Dama virginiana Zimm.

- Zimmermann, E.*, 1777, Zool. Geog., p. 532.
 Allen, J. A. 1876 A, p. 48. (Cervus.)
 Baird, S. F. 1857 A, p. 643, text fig. 13. (Cervus.)
 Cooper, W. 1831 A, p. 207. (Cervus.)
 Cope, E. D. 1869 E, p. 176. (Cariacus.)
 1869 N, p. 742. (Cariacus.)
 1871 K, p. 176. (Cariacus.)
 1899 A, p. 266. (Cariacus.)
 Cuvier, G. 1834 A, vi, p. 63, pl. 166. (Cervus.)
 Emmons, E. 1858 B, p. 200. (Cervus.)
 Erxleben, C. P., 1777, Syst. Reg. Anim., Mamm., p. 312. (Cervus dama americanus; americanus not nomenclatorial.)
 Flower and Lydekker, 1891 A, p. 326, fig. 132. (Cariacus.)
 Hensel, R. 1859 A, p. 257, pl. xi, fig. 6. (Cariacus, Cervus.)
 Kindel, E. M. 1898 A, p. 485. (Cariacus.)
 Leidy, J. 1854 I, p. 200. (Cervus.)
 1860 B, p. 109, pl. xx, figs. 1-4. (Cervus.)
 1869 A, p. 376. (Cervus virg.)
 1889 B, p. 96. ("Deer.")
 1889 E, p. 22. (Cervus.)
 1889 H, p. 6. (Cervus.)
 1892 A. (Cervus.)
 Lydekker, R. 1898 A, p. 249, pl. xx; text figs. 68, 69.
 Rafinesque, C. 1832-33, Atlantic Jour. p. 109, figure. (Odocoileus speleus.)
 Roger, O. 1896 A, p. 232. (Cervus.)
 Trouessart, E. L. 1898 A, p. 892. (Cariacus.)
 Wailes, B. L. C. 1854 A, p. 286. (Cervus.)
 Winchell, A. 1864 A, p. 223. ("Deer.")
 Wyman, J. 1862 A, p. 421. (Cervus.)
 Pleistocene and Recent. Fossil from South Carolina, New Jersey, Indiana, Kentucky, Virginia, Pennsylvania, Illinois, Mississippi.
Dama whitneyi (Allen.)
 Allen, J. A. 1876 A, p. 49. (Cervus.)
 Pleistocene; lead region of Illinois, Iowa, and Wisconsin.

CERVUS Linn. Type *C. elaphus* Linn.

Linnaeus, C., 1758, Syst. Nat., ed. 10, i, p. 66.

By many of the following authors the generic name *Cervus* is employed in a more comprehensive sense than is here given it.

- Baird, S. F. 1857 A, p. 637, in part.
 Brooke, V. 1878 A.
 Cope, E. D. 1887 B, p. 398.
 Cuvier, G. 1834 A, vi, p. 43, plates.
 Flower and Lydekker 1891 A, p. 319.
 Leidy, J. 1871 C, p. 351.

- Lydekker, R. 1885 C, p. 73.
 1898 A, p. 61.
 Nicholson and Lydekker 1889 A, p. 1338.
 Nitsche, H. 1891 A.
 Owen, R. 1866 B, p. 477.
 Paulli, S. 1900 A, p. 210.
 Pictet, F. J. 1853 A, p. 353.
 Rüttimeyer, L. 1884 A, p. 408.
 Trouessart, E. L. 1898 A, p. 880.
 Zittel, K. A. 1893 B, p. 401. (Elaphus.)

Cervus canadensis Erxl.

- Erleben, C. P., 1777, Syst. Reg. Anim., Mamm., p. 305. (*Cervus elaphus canadensis*.)
 Allen, J. A. 1876 A, p. 48.
 Baird, S. F. 1857 A, p. 638, text figs. 9-11.
 Cooper, W. 1831 A, p. 207.
 Cope, E. D. 1869 E, p. 178.
 1869 N, p. 742.
 Cuvier, G. 1834 A, vi, p. 49, pl. 164, figs. 13-22.
 De Kay, J. E. 1842 C, p. 120, pl. xxix, fig. 2. (*Elaphus americanus*.)
 Flower and Lydekker 1891 A, p. 322, fig. 129.
 Hall, J. 1846 B, p. 391. (*Elaphus*.)
 1887 A, p. 39. (*Elaphus*.)
 Leidy, J. 1869 A, p. 377.
 1889 H, p. 6.
 Logan, W. E. 1863 A, p. 914.
 Lydekker, R. 1898 A, p. 95, figs. 24, 25.

- Putnam, F. W., 1900, 33d Report Peabody Mus. Amer. Archaeol., Ethnol., Harvard Univ., p. 275. ("Elk.")
 Roger, O. 1896 A, p. 235. (*C. americanus fossilis*.)
 Scott, W. B. 1885 C, text fig. 1.
 Trouessart, E. L. 1898 A, p. 883.
 Tscherski, J. D. 1892 A, p. 222. (*Cervus canadensis maral*; in Russia.)
 Winchell, A., 1864 A, p. 224. ("Elk.")
 Zittel, K. A. 1893 B, p. 402.
 Pleistocene and Recent. Fossil in New York, New Jersey, Kentucky, North Carolina, Florida, Ontario; also fossil in Europe and Siberia.

Cervus fortis Cope.

- Cope, E. D. 1878 C, p. 223.
 Roger, O. 1896 A, p. 235.
 Trouessart, E. L. 1898 A, p. 882.
 Pliocene (Loup Fork); Oregon.

CERVALCES Scott. Type *Cervus americanus* Harlan.

- Scott, W. B. 1885 A, p. 420.
 Cope, E. D. 1887 B, p. 398.
 1889 G, p. 132.
 Flower and Lydekker 1891 A, p. 327.
 Lydekker, R. 1898 A, pp. 51, 60. (*Alces*.)
 Nicholson and Lydekker 1889 A, p. 1341.
 Scott, W. B. 1885 D, p. 4.
 Zittel, K. A. 1893 B, p. 404.

Cervalces americanus (Harlan)

- Harlan, R., 1825 A, p. 245. (*Cervus*.)
 Cooper, W. 1831 A, p. 174. ("Cervus.")
 Cooper, Smith, and De Kay 1831 A, p. 371. (*Cervus alces*?)
 Cope, E. D. 1889 G, p. 134.
 De Kay, J. E. 1842 C, p. 120, in part. (*Elaphus*.)
 Flower and Lydekker, 1891 A, p. 327.
 Godman, J. D. 1828 A, ii, pl. opp. p. 197; iii, p. 242. ("Fossil elk.")

- Harlan, R. 1834 B, p. 70. (*Cervus*.)
 1835 B, p. 275. (*Cervus*.)
 Leidy, J. 1869 A, p. 379. (*Cervus*.)
 1884 B. (*Cervus*.)
 Lydekker, R. 1898 A, p. 60, fig. 14. (*Alces scotti*.)
 Osborn, H. F. 1898 N, p. 845. (*Cervalces*.)
 1898 Q, p. 7, plate.
 Roger, O. 1896 A, p. 236. (*Cervus*.)
 Scott, W. B. 1885 A, p. 420, with 2 figures.
 1885 C, p. 174, pl. ii, text figs. 2, 5, 7.
 1885 D, p. 4, plate.
 Trouessart, E. L. 1898 A, p. 883 (*Cervus canadensis*, in part); p. 886 (*Cervalces americanus*.)
 Williston, S. W. 1897 I, p. 303. (*Cervalces? americanus*?)
 Wistar, C. 1818 A, p. 375, pl. x, figs. 4, 5. ("Cervus.")
 Pleistocene; Kentucky, New Jersey.

ALCES Jardine. Type *Cervus alces* Linn.

- Baird, S. F. 1857 A, p. 631. (*Alce*.)
 Cope, E. D. 1887 B, p. 378.
 Flower and Lydekker 1891 A, p. 326.
 Lydekker, R. 1898 A, p. 49.
 Roger, O. 1887 A.
 Rüttimeyer, L. 1881 A, p. 54.
 1882 A, p. 28.
 1884 A, p. 414.
 Scott, W. B. 1885 C.
 Zittel, K. A. 1893 B, p. 404.

Alces americanus Jardine.

- Jardine, W., 1837, Nat. Library, iii, p. 125.
 Baird, S. F. 1857 A, p. 631, text figs. 1, 2. (*Alce*.)
 Cooper, W. 1831 A, p. 207. (*Cervus alces*.)
 Flower and Lydekker 1891 A, p. 326, fig. 133. (*Alces machlis*, in part.)
 Hensel, R. 1859 A, pl. xi, fig. 2. (*C. alces* of Europe.)
 Leidy, J. 1869 A, p. 377. (*Cervus alces*.)
 Lydekker, R. 1885 C, p. 78. (*A. machlis*, in part.)
 1898 A, p. 52, pl. ii, text fig. 11. (*A. machlis*.)

- Meyer, H. 1832 A, pl. xxxvii. (*Cervus alces fossilis*, not *A. americanus*.)
 Nitsche, H. 1891 A. (*C. alces*, of Europe.)
 Richardson, J. 1854 A, p. 20, pls. xx, xxi; pl. xxii, fig. 1; pl. xxiv (*Cervus alces*); p. 102 (*Alces muswa*.)
 Scott, W. B. 1885 C, p. 181, figs. 3, 4. (*A. machlis*.)
 Trouessart, E. L. 1898 A, p. 887.
 Williston, S. W. 1898 I, p. 92. (*A. americanus*?)
 Zittel, K. A. 1893 B, p. 404.
 Recent in northern portions of North America: Pleistocene; Kentucky, Kansas?, Alaska.

Alces brevitrabalis Cope.

- Cope, E. D. 1889 F, p. 162, February.
 Trouessart, E. L. 1898 A, p. 887.
 Pleistocene; Washington.

Alces semipalmatus Cope.

- Cope, E. D. 1889 F, p. 162, February.
 Roger, O. 1896 A, p. 237. (*Cervus*.)
 Trouessart, E. L. 1898 A, p. 887.
 Pleistocene; Washington.

RANGIFER H. Smith. Type *Cervus tarandus* Linn.

- Smith, H., 1827, Griffith's Anim. Kingd., v, p. 304.
 Baird, S. F. 1857 A, p. 633.
 Brooke, V. 1878 A, p. 927.
 Cope, E. D. 1887 B, p. 398.
 Flower and Lydekker 1891 A, p. 324.
 Lydekker, R. 1885 C, p. 79.
 1898 A, p. 33.
 Paulli, S. 1900 A, p. 216.
 Roger, O. 1887 A.
 Rüttimeyer, L. 1881 A, p. 51.
 1882 A, p. 27.
 1884 A, p. 413.
 Zittel, K. A. 1893 B, p. 404.

Rangifer caribou (Gmelin).

- Baird, S. F. 1857 A, p. 633, text figs. 3-6.
 Cooper, W. 1831 A, p. 207. (*Cervus tarandus*.)
 Cope, E. D. 1869 N, p. 740. (*R. groenlandicus*.)
 Dana, J. D. 1875 C, p. 354. (*R. tarandus*.)
 Fisher, G. J. 1859 A, p. 194. ("Reindeer.")
 Leidy, J. 1859 II. ("Reindeer.")
 1869 A, p. 377, pl. xxviii, fig. 9. (*Cervus tarandus*.)
 1879 A. (*R. caribou*, *Cervus muscatinensis*.)
 1880 A.
 1889 H, p. 5, pl. ii, fig. 22.
 Lesley, J. P. 1889 A, p. 855, figure. ("Reindeer.")
 Lydekker, R. 1898 A, p. 42. (*R. tarandus caribou*.)

- Mercer, H. C. 1894 A, p. 98.
 Shaler, N. S. 1871 B, p. 167. (*Tarandus rangifer*.)
 Trouessart, E. L. 1898 A, p. 888.
 Recent; Newfoundland to Alaska; not on Arctic coasts. Pleistocene; New England, New York, New Jersey, Pennsylvania, Kentucky, Iowa, Alaska.

Rangifer tarandus (Linn.).

- Linnaeus, C., 1758, Syst. Nat., 10, i, p. 67. (*Cervus*.)
 Brandt, J. F. 1867 B.
 Buckland, W. 1831 A, pp. 595, 597, 605, pl. iii, figs. 11-13. ("Reindeer.")
 Hensel, R. 1859 A, pl. xi fig. 1. (*Cervus*.)
 Lydekker, R. 1885 C, p. 79, fig. 7.
 1898 A, p. 37.
 Richardson, J. 1854 A, pp. 20, 115, pl. xxii, fig. 2; pl. xxiii.
 Struckmann, C. 1880 A. (*Cervus*.)
 Trouessart, E. L. 1898 A, p. 887.
 Tscherski, J. D. 1892 A, p. 199.
 Zittel, K. A. 1893 B, p. 404.
 Recent in northern Europe and northern America. Pleistocene in Alaska. Has been reported from New England, New York, New Jersey, and Kentucky, but the remains probably belong to *R. caribou*.

ANTILOCAPRIDÆ.

- Flower and Lydekker 1891 A, p. 333.
 Gadow, H. 1898 A, p. 49. (*Cervidæ*.)
 Murie, J. 1870 A.

- Nicholson and Lydekker 1889 A, p. 1345.
 Trouessart, E. L. 1898 A, p. 903.

ANTILOCAPRA Ord. Type *A. americana* Ord.

- Baird, S. F. 1857 A, p. 665.
 Flower and Lydekker 1891 A, p. 333.
 Nitsche, H. 1899 A, p. 186.
 Rüttimeyer, L. 18. (*Dicranocerus*.)
 Zittel, K. A. 1893 B, p. 417.

Antilocapra americana Ord.

- Allen, Harrison, 1889 A.

- Allen, J. A. 1876 A, p. 48.
 Baird, S. F. 1857 A, p. 666, pl. xxv.
 Murie, J. 1870 A.
 Richardson, J. 1854 A, p. 131, pls. xvi-xix.
 Recent; Mexico and California to British America. Pleistocene in lead region of Illinois, Iowa, and Wisconsin.

BOVIDÆ.

- Baird, S. F. 1857 A, p. 664. (*Cavicornia*.)
 Baur, G. 1890 B.
 Branco, W. 1897 A, p. 27.
 Brandt, E. 1888 A. (*Cavicornia*.)
 Brooke, V. 1878 A, p. 884.
 Cope, E. D. 1887 B, pp. 379, 394.
 1888 X, p. 1081.
 1889 C, p. 162.
 Cope and Wortman 1884 A, pp. 22, 24.
 Cuvier, G. 1834 A, vi, p. 217.
 Flower W. H. 1874 A.
 1883 D, p. 432.
 Flower and Lydekker 1891 A, p. 334.
 Gadow, H. 1898 A, p. 49.
 Gill, T. 1872 B, pp. 8, 76.
 Lydekker, R. 1885 C, p. 1.
 1896 B.
 1898 B.
 Nicholson and Lydekker 1889 A, p. 1345.

- Nitsche, H. 1899 A, p. 186.
 Owen, R. 1866 B.
 1868 A, p. 348.
 Richardson, J. 1854 A, p. 28.
 Rüttimeyer, L. 1862 B.
 1865 A.
 1867 B. (*Cavicornia*.)
 1877 A.
 1878 A.
 1883 A, p. 10. (*Cavicornia*.)
 Sanson, A. 1878 A.
 Steinmann and Döderlein 1890 A, p. 808.
 Tomes, C. S. 1898 A, p. 407.
 Trouessart, E. L. 1898 A, p. 904.
 Turner, H. N. 1850 A.
 Weyhe, — 1875 A, p. 119.
 Wilkens, M. 1885 E.
 Zittel, K. A. 1893 B, p. 425. (*Cavicornia*.)

ANTILOPINÆ.

- Baird, S. F. 1857 A, p. 664.
 Flower and Lydekker 1891 A, p. 349. ("Rupicaprine section.")
 Nicholson and Lydekker 1889 A, p. 1346. ("Antelopes.")
- Rütimeyer, L. 1867 B. (Antilopina.)
 1877 A, p. 17. (Antilopina.)
 1878 A, p. 78. ("Antilopen.")
 Zittel, K. A. 1893 B, p. 415.

NEMORHÆDUS H. Smith.

- Smith, H., 1827, Griffith's Anim. Kingd., iv, p. 277.
 Flower and Lydekker 1891 A, p. 350.
 Rütimeyer, L. 1877 A, p. 43. (Nemorhedus.)
 1878 A, p. 99. (Kemas.)
 Trouessart, E. L. 1898 A, p. 964.
- Nemorhædus palmeri** Cragin.
 Cragin, F. W. 1899 A, p. 610, pl. lvii.
 1900 A, p. 1.
 Pleistocene; Colorado.

CAPRINÆ.

- Baird, S. F. 1857 A, p. 664. (Ovinæ.)
 Flower and Lydekker 1891 A, p. 351. ("Caprine section.")
 Gill, T. 1872 B, pp. 9, 77. (Caprinæ, Ovinæ.)
- Owen, R. 1868 A, p. 348. (Ovidæ.)
 Stehlin, H. G. 1893 A.
 Trouessart, E. L. 1898 A, p. 968.
 Zittel, K. A. 1893 B, p. 422. (Ovinæ.)

Ovis Linn. Type *O. aries* Linn.

- Linnaeus, C., 1758, Syst. Nat., ed. 10, i, p. 70.
 Flower, W. H. 1885 A.
 Flower and Lydekker 1891 A, p. 354.
 Owen, R. 1866 B, p. 474, figs. 323, 324.
 1868 A, p. 349, fig. 279.
 Stehlin, H. G. 1893 A, p. 71.
 Trouessart, E. L. 1898 A, p. 975.
 Zittel, K. A. 1893 B, p. 424.
- Ovis mamillaris** Foster.
 Foster, J. W. 1837 A, p. 82, figs. 19 a, b.
 De Kay, J. E. 1842 C, p. 112.
 Leidy, J. 1869 A, p. 375.
 Roger, O. 1896 A, p. 244.
 Trouessart, E. L. 1898 A, p. 978.
 Pleistocene?; Ohio.
 A doubtful fossil.

Ovibos Blainv. Type *O. moschatus* (Zimm.).

- Blainville, H. M. D., 1816, Bull. Soc. Philom., p. 76.
 Agassiz, L. 1853 A.
 Baird, S. F. 1857 A, p. 680.
 Dawkins, W. B. 1872 A.
 Flower and Lydekker 1891 A, p. 357.
 Leidy, J. 1852 F, p. 71. (Boötherium.)
 1853 A, p. 12. (Boötherium.)
 1870 M, p. 97. (Boötherium.)
 Lönnberg, E. 1900 A, p. 686.
 Marsh, O. C. 1877 E.
 Nicholson and Lydekker 1889 A, p. 1350.
 Owen, R. 1856 C, p. 124.
 Richardson, J. 1854 A, p. 120. (Bubalus.)
 Rütimeyer, L. 1868 A.
 1898 B, p. 139.
 Zittel, K. A. 1893 B, p. 424.
- Ovibos appalachicolus** Rhoads.
 Rhoads, S. N. 1895 A, p. 248. (Bison.)
 Lucas, F. A. 1899 A, p. 756.
 Rhoads, S. N. 1897 A, p. 492.
 Pleistocene; Pennsylvania.
- Ovibos bombifrons** (Harlan).
 Harlan, R. 1825 A, p. 271. (Bos.)
 Cooper, W. 1831 A, pp. 173, 206. (Bos.)
 Cooper, Smith, and De Kay 1831 A, p. 371. (Bos.)
 Cope and Wortman 1884 A, p. 24.
 Dawkins, W. B. 1870 A, p. 233. (Ovibos.)
 1872 A, p. 29. (Boötherium.)
- De Kay, J. E. 1828 A, p. 286. (Bos.)
 1842 C, p. 110. (Bos.)
 Harlan, R. 1834 B, p. 71. (Bos.)
 1835 B, p. 275. (Bos.)
 Leidy, J. 1852 F, p. 71. (Boötherium.)
 1853 A, p. 17, pl. iv, fig. 2; pl. v, figs. 1, 2. (Boötherium.)
 1854 G, p. 210. (Boötherium.)
 1869 A, p. 374.
 Lydekker, R. 1885 C, p. 39.
 Meyer, H. 1835 A, p. 143. (Bos.)
 Pictet, F. J. 1853 A, p. 366.
 Roger, O. 1896 A, p. 244. (O. priscus.)
 Rütimeyer, L. 1865 A, p. 328. (O. priscus.)
 1868 A, pp. 9, 17. (O. priscus.)
 Trouessart, E. L. 1898 A, p. 984, in part only.
 Wistar, C. 1818 A, p. 379, pl. xi, figs. 10, 11. (No systematic name.)
 Pleistocene; Kentucky.
- Ovibos cavifrons** Leidy.
 Leidy, J. 1852 F, p. 71. (Boötherium or Ovibos.)
 Agassiz, L. 1851 B, p. 179. (Bos bombifrons.)
 Cooper, W. 1831 A, pp. 173, 206. (Bos pallasii.)
 Cope and Wortman 1884 A, p. 24.
 Dawkins, W. B. 1870 A, p. 233.
 1872 A, p. 29. (Boötherium.)
 De Kay, J. E. 1828 A, p. 291, pl. vi. (Bos pallasii.)
 1842 C, p. 110. (Bos pallasii.)
 Giebel, C. G. 1847 A, p. 154. (B. pallasii.)

- Godman, J. D. 1828 A, p. 244. ("De Kay's fossil ox.")
- Harlan, R. 1834 B, p. 72. (*Bos pallasii*.)
- 1835 B, p. 276. (*B. pallasii*.)
- Leidy, J. 1853 A, p. 12, pl. iii, figs. 1, 2; pl. iv, fig. 1. (*Boötherium*.)
- 1854 G, pp. 209, 210. (*Boötherium*.)
- 1869 A, p. 374.
- 1870 L.
- 1870 M, p. 97. (*Boötherium*.)
- Lydekker, R. 1885 C, p. 40. (*O. bombifrons*, in part.)
- 1898 B, p. 148. (*O. bombifrons*, in part.)
- McGee, W. J. 1887 A, p. 217.
- Meyer, H. 1835 A, p. 155. (*B. pallasii*.)
- Pictet, F. J. 1853 A, p. 366. (*Bos pallasii*.)
- Richardson, J. 1854 A, pp. 25, 120, pl. xi, figs. 2-4. (*Ovibos maximus*.)
- Rütimeyer, L. 1865 A, p. 327. (*O. prisceus*.)
- St. John, S. 1851 A, p. 235. (*Bos bombifrons*.)
- Trouessart, E. L. 1898 A, p. 986. (*O. bombifrons*, in part.)
- Wailles, B. L. C. 1854 A, p. 286. (*Boötherium*.)
- Zittel, K. A. 1893 B, p. 425. (*O. prisceus*.)
- Pleistocene; Indian Territory, Missouri, Kentucky, Ohio, Iowa, Alaska.

Ovibos moschatus (Zinnm.).

- Zimmermann, E., 1780, Geog. Gesch., ii, p. 86. (*Bos*.)
- Baird, S. F. 1857 A, p. 681.
- Buckland, Wm. 1831 A, pp. 597, 605. ("Musk-ox.")
- Cuvier, G. 1834 A, vi, p. 311, pl. clxxi, figs. 15-17. (*Bos*.)
- Dall, W. H. 1869 A. ("Musk-ox.")
- Dawkins, W. B. 1872 A.
- 1883 A.
- Gratacap, L. P. 1896 A, p. 994.
- Leidy, J. 1851 G, p. 210.
- 1869 A, p. 373.
- Lönnberg, E. 1900 A, p. 686, figures.
- Lydekker, R. 1888 C, p. 88.
- 1898 B, p. 142.
- Owen, R. 1856 C, p. 124, figs. 3-6. (*Bubalus*.)
- Richardson, J. 1854 A, pp. 22, 66, 119, pls. ii-v; pl. xi, figs. 1-5; pl. xiv, fig. 5.
- Roger, O. 1896 A, p. 244.
- Rütimeyer, L. 1868 A, p. 6, figs. 1, 2.
- Trouessart, E. L. 1898 A, p. 984.
- Tscherski, J. D. 1892 A, p. 153, pl. iv, figs. 3-6.
- Woodward, H. 1894 A, 1.
- Recent; northern North America, Greenland, Pleistocene; Alaska, Greenland, northern Europe, and Asia.

BOVINE.

- Flower and Lydekker 1891 A, p. 360. ("Bovine section.")
- Gill, T. 1872 B, pp. 8, 77.
- Roger, O. 1896 A, p. 244.

- Stehlin, H. G. 1893 A.
- Trouessart, E. L. 1898 A, p. 985.
- Zittel, K. A. 1893 B, p. 425.

Bison H. Smith. Type *Bos bison* Linn.

- Smith, H., 1827, in Griffith's Anim. Kingd., v, p. 373.
- Allen, J. A. 1876 B.
- Baird, S. F. 1857 A, p. 682. (*Bos*.)
- Brandt, F. 1867 C, p. 150.
- Cope, E. D. 1889 G, p. 131.
- Desor, E. 1852 A, p. 58. (*Harlanus*.)
- Flower and Lydekker 1891 A, p. 360. (*Bos*.)
- Leidy, J. 1871 C, p. 344.
- Lucas, F. A. 1897 A.
- 1899 A.
- Lydekker, R. 1898 B, p. 5 (*Bos*.); p. 50 (*Bison*, as subgenus).
- Marsh, O. C. 1877 E.
- Owen, R. 1846 A, p. 94. (*Harlanus*, type *H. americanus* - *B. latifrons*.)
- 1847 D, p. 18. (*Harlanus*.)
- 1856 C, p. 129.
- Pictet, J. F. 1853 A, p. 303. (*Harlanus*.)
- Rütimeyer, L. 1865 A, p. 335.
- Trouessart, E. L. 1898 A, p. 994.
- Tscherski, J. D. 1892 A, p. 75.
- Zittel, K. A. 1893 B, p. 430.

Bison alleni Marsh.

- Marsh, O. C. 1877 D, p. 252.
- Blake, W. P. 1898 A, pp. 71, 72.
- Cope, E. D. 1877 Y, p. 629.
- 1894 A, p. 68. (*Bos cramptonus*; no description.)

- Cope, E. D. 1894 H, p. 456, pl. xxii, figs. 1-4. (*Bos cramptonus*.)
- King, C. 1878 A, p. 430.
- Lucas, F. A. 1897 A.
- 1899 A, pp. 756, 765, pls. lxxvii-lxxx; text fig. 2; text fig. 1^a.
- Matthew, W. D. 1899 A, p. 74.
- Rhoads, S. N. 1897 A, p. 488, pl. xii, fig. 5. (*Bos cramptonus*.)
- Roger, O. 1896 A, p. 246.
- Trouessart, E. L. 1898 A, p. 995.
- Williston, S. W. 1897 I, p. 302. (*B. cramptonus*, *B. alleni*.)
- 1898 I, p. 92. (*B. cramptonus*, *B. alleni*.)
- Miocene (Loup Fork; Kansas, Oklahoma, Idaho).

Bison antiquus Leidy.

- Leidy, J. 1852 H, p. 117.
- Allen, J. A. 1876 B, p. 21, pl. iii, figs. 1, 3, 6, 8, 10.
- Cope, E. D. 1869 E, p. 176. (*Bos antiquus*?)
- 1894 H, p. 457. (Syn. of *Bos americanus*.)
- Leidy, J. 1853 A, p. 11, pl. ii, fig. 1.
- 1854 G, p. 210.
- 1867 A, p. 85. (*B. latifrons*?)
- 1869 A, p. 371. (*B. latifrons*, in part.)
- 1870 H, p. 13. (*Bos*.)
- 1873 B, pp. 253, 318, in part; pl. xxviii, figs. 4, 5, 6, 7, 7? (*B. latifrons*.)

- Lucas, F. A. 1899 A, p. 759. pl. lxxvii-lxx.
1899 B, p. 17.
Lydekker, R. 1898 B, p. 61. (Syn. of *Bos priscus*.)
Middleton and Moore 1900 A, p. 178, plate.
Rhoads, S. N. 1897 A, p. 484 (*B. antiquus*); p. 501,
pl. xii, fig. 2 (*B. californicus*).
Richardson, J. 1854 A, p. 139.
Rütimeyer, L. 1865 A, p. 336.
1868 A, p. 60. (*B. priscus*.)
Zittel, K. A. 1893 B, p. 430.
Pleistocene; Kentucky, Virginia?, Illinois?,
California.

Bison bison (Linn.).

Linnæus, C., 1758, Syst. Nat., ed. 10, i, p. 72. (*Bos*.)
Unless otherwise indicated, the following authors refer to this species under the name *Bison americanus*.

- Allen, J. A. 1876 B, pl. xi, fig. 2; pl. iii, figs. 2, 4, 7,
9, 11; pl. v, figs. 1-8; pl. vi, figs. 1-8; pl. vii, figs.
1-6, 9, 10; pl. viii, figs. 1-11; pl. ix, figs. 1-8; pl.
x, figs. 1-12; pl. xi, figs. 1-10; pl. xii, figs. 1-6.
Baird, S. F. 1857 A, p. 682. (*Bos*.)
Cooper, W. 1831 A, p. 43. (*Bos americanus*.)
Cooper, Smith, and De Kay 1831 A, p. 371. (*Bos*
americanus.)
Cope and Wortman 1884 A, p. 24.
De Kay, J. E. 1842 C, p. 110.
Knight, — 1835 A, p. 166. ("Buffalo.")
Leidy, J. 1853 A, p. 5.
1854 G, p. 210.
1869 A, p. 371.
1870 K, p. 69. (*Bos americanus*.)
1880 A, p. 347.
1889 E, p. 22.
1889 H, p. 5.
1892 A.
Lydekker, R. 1898 B, p. 79. (*Bos*.)
Mercer, H. C. 1894 A, p. 98.
Packard, A. S. 1867 A, pp. 243, 245, 246, 257, 261.
Rhoads, S. N. 1897 A, p. 484, pl. xii, fig. 1.
Richardson, J. 1854 A, p. 139, pl. vi, figs. 3, 4; pl.
vii, figs. 4, 5; pl. viii, figs. 9-12.
Rütimeyer, L. 1865 A, p. 335.
1867 B, p. 99.
1868 A, p. 58.
Shaler N. S. 1876 A, p. 234.
Trouessart, E. L. 1898 A, p. 995.
Underwood, L. 1890 A, p. 953.
Williston, S. W. 1897 I, p. 302.
1898 I, p. 91.
Wyman, J. 1862 A, p. 421. ("Bos.")

Within recent times occupying a large por-
tion of N. America. Pleistocene; Illinois, Iowa,
Wisconsin, Kansas, Colorado, Pennsylvania,
New York, South Carolina, Kentucky.

Bison crassicornis Richardson.

- Richardson, J.* 1854 A, pp. 40, 139, pl. ix; pl. xi, fig.
6; pl. xii, figs. 1-4; pl. xiii, figs. 1, 2; pl. xv, figs.
1-4.
Allen, J. A. 1876 B, pp. 14, 15, 21, ?pl. viii, fig. 12.
(Syn. of *B. antiquus*.)
Buckland, W. 1831 A, p. 595, pl. iii, figs. 1-7.
(*Bos urus*.)
Cope, E. D. 1894 H, p. 457. (*Bos*.)

Leidy, J. 1854 G, p. 210. (*Bison priscus*, *B. crassi-*
cornis.)

- 1869 A, p. 371 (*Bison priscus*); p. 372 (Syn.
of *Bison latifrons*).
Lucas, F. A. 1897 A.
1899 A, p. 760, pls. lxxiii-lxxvi; ?pl. lxxiii;
text figs. 1, 2.
1899 B, p. 18.
Lydekker, R. 1885 C, pp. 25, 26. (*Bos bonasus*, var.
priscus.)
1898 B, p. 61. (Syn. of *Bos priscus*.)
Rhoads, S. N. 1897 A, p. 500, pl. xii, figs. 3, 6. (*B.*
alaskensis.)
Richardson, J. 1854 A, pp. 33, 139, pl. vi, figs. 5, 6;
pl. vii, fig. 1; pl. x, figs. 1-6. (*B. priscus*?)
Woodward, H. 1894 A. (*B. priscus*.)
Pleistocene; Alaska.

Bison ferox Marsh.

- Marsh, O. C.* 1877 D, p. 252.
Blake, W. P. 1898 A, pp. 71, 72.
Cope, E. D. 1877 Y, p. 629.
King, C. 1878 A, p. 430.
Lucas, F. A. 1899 A, p. 766, pl. lxxxii.
Matthew, W. D. 1899 A, p. 74.
Rhoads, S. N. 1897 A, pp. 489, 500.
Roger, O. 1896 A, p. 246.
Trouessart, E. L. 1898 A, p. 995.
Miocene (Loup Fork); Nebraska.

Bison latifrons (Harlan.)

- Harlan, R.* 1825 A, p. 273. (*Bos*.)
Allen, J. A. 1876 B, p. 7, pl. i; pl. ii, figs. 1-4; pl.
vii, fig. 11.
Blainville, H. M. D. 1864 A, iv AA, p. 187. (*Sus*
americanus.)
Blake, W. P. 1898 A, pp. 66, 71 (*Bos arizonica*);
p. 69 (*Bison latifrons*).
1898 B, p. 247. (*B. latifrons*, *B. arizonica*.)
Bojanus, L. H. 1827 A, p. 427. (Syn. of *Urus pris-*
cus.)
Brandt, F. 1867 C.
Broadhead G. C. 1870 B. (*Bos*.)
Carpenter, W. 1846 A, p. 246, figs. 1, 2. ("Ex-
tinct ox.")
Collett, J. in Cope and Wortman 1884 A, p. 24,
footnote.
Cooper, W. 1831 A, p. 174. (*Bos*.)
Cope, E. D. 1884 G, p. 21. (*Bos*.)
1889 F.
1889 G, p. 131.
1894 H, p. 457. (*Bos*.)
Cope and Wortman 1884 A, p. 24.
Couper, J. H. 1842 A, p. 216. ("Bos," *Sus ameri-*
canus.)
Cuvier, G. 1808 B, p. 382, pl. xxxiv, fig. 2.
("Aurochs.")
1834 A, vi, p. 287, pl. clxxiii, fig. 2.
("Aurochs.")
De Kay, J. E. 1828 A, p. 286. (*Bos*.)
1842 C, p. 110. (*Bos*.)
Faujas, St. F. 1802 A, p. 190, pl. xliii. ("Bœuf
fossil.")
Flower and Lydekker 1891 A, p. 364. (*Bos*.)
Giebel, C. G. 1847 A, p. 153 (*Bos priscus*, in part);
p. 174 (*Sus americanus*).

- Godman, J. D. 1828 A, iii, p. 243, pls. opp. pp. 242, 245. ("Latifrons.")
- Harlan, R. 1834 B, p. 71. (Bos.)
- 1835 B, p. 276. (Bos.)
- 1842 B, p. 143, pl. iii, fig. 1. (?Sus americana.)
- Leidy, J. 1852 H, p. 117.
- 1853 A, p. 8, pls. i, ii, figs. 2-7.
- 1854 C, p. 89.
- 1854 G, p. 210.
- 1860 B, p. 109, pl. xvii, figs. 15, 16. (Identification doubtful.)
- 1867 A, p. 85.
- 1869 A, p. 371.
- 1871 C, p. 345, in part.
- 1889 C, p. 12.
- Lucas, F. A. 1899 A, p. 767, pls. lxxxii, lxxxiii.
- Lydekker, R. 1885 C, p. 27.
- 1898 B, p. 92. (Bos.)
- Meyer, H. 1835 A, p. 141. (Syn. of *Bos priscus*.)
- Owen, R. 1846 A, p. 94. (*Harlanus americanus*.)
- 1847 D, p. 20, pl. vi. (*H. americanus*.)
- Peale, R. 1803 A, p. 325, pl. vi. ("Great Indian buffalo.")
- Pictet, F. J. 1853 A, p. 366. (Bos.)
- Rafinesque, C. S. 1831, Enum. remark, nat. objects (*Taurus latifrons*, *T. gigas*); 1832-33, *Atlantic Jour.*, p. 28 (*Taurus latifrons*).
- Rhoads, S. N. 1897 A, p. 486, pl. xii, fig. 4.
- Roger, O. 1896 A, p. 208 (*Harlanus americanus*.)
- p. 246 (*Bison latifrons*.)
- Rütimeyer, L. 1865, p. 336.
- 1868 A, p. 60. (*B. priscus*.)
- Sanson, A. 1878 A, p. 757. (Bos.)
- Shaler, N. S. 1876 A, p. 235. (Bos.)
- Smith, H. P. 1887 A, p. 19, pl. i.
- Stehlin, H. G. 1899 A, pp. 21, 118. (*Platygonus ziegleri*.)
- Trouessart, E. L. 1898 A, p. 817 (*Harlanus americanus*); p. 995 (*Bison latifrons*).
- Wailles, B. L. C. 1854 A, p. 286.
- Whitney, J. D. 1879 A, p. 247.
- Wilckens, M. 1885 B, p. 270. (*Sus americana*.)
- Zittel, K. A. 1893 B, p. 430.
- Pleistocene; Kentucky, South Carolina?, Mississippi, Ohio, Georgia?, Texas, Florida, Arizona, Mexico.

Bison occidentalis Lucas.

- Lucas, F. A. 1898 D, p. 678.
- Allen, J. A. 1876 B, p. 34, pl. iv. (*B. antiquus*.)
- ?Dall, W. H. 1869 A, p. 136. ("Buffalo.")
- ?Hay, R. 1885 A, p. 98. ("Bison.")
- ?Leidy, J. 1870 K, p. 69. (*Bos americanus*.)
- Lucas, F. A. 1899 A, p. 758, pls. lxxv, lxxvi.
- 1899 B, p. 17, pls. viii, ix.
- Stewart, A. 1897 B, p. 127, pl. xvii; text fig. 1. (*B. antiquus*.)
- Williston, S. W. 1897 I, p. 302. (*B. antiquus*.)
- 1898 I, p. 91. (*B. antiquus*.)
- Pleistocene; Alaska, Kansas.
- Bos bovis*.—This species has been reported from Ashley River, South Carolina, by F. S. Holmes (1850 B, p. 203). Leidy (1869 A, p. 443), characterizes it as a doubtful fossil. See also Holmes, F. S. 1858 A, in which paper are found extracts from letters written by Louis Agassiz and Dr. Leidy.

Order ANCYLOPODA Cope.

- Cope, E. D. 1889 I, p. 153.
- Ameghino F. 1894 A, p. 311.
- Cope, E. D. 1889 C.
- 1891 N, p. 76.
- 1898 B, p. 120. (*Chalicotheria*.)
- Gadow, H. 1898 A, p. 47.
- Hay, O. P. 1899 F, p. 682.
- Marsh, O. C. 1892 D, p. 448. (*Chalicotheria*.)
- 1897 B, p. 144. (*Chalicotheria*.)
- Osborn, H. F. 1893 D, p. 43.
- Osborn, H. F. 1893 F.
- 1893 J. (*Perissonychia*.)
- 1893 K.
- 1898 A, p. 146.
- Osborn and Wortman 1893 A, p. 4. (Ord. Ancylopoda; subord. *Perissonychia*.)
- Roger, O. 1896 A, p. 196.
- Trouessart, E. L. 1898 A, p. 693.
- Woodward, A. S. 1898 B, p. 307.

Superfamily CHALICOTHERIOIDEA.

- Gill, T. 1872 B, p. 71.
- Osborn, H. F. 1898 I, p. 79.
- Scott and Osborn 1890 B, p. 99.

CHALICOTHERIIDÆ.

- Gill, T. 1872 B, pp. 8, 72.
- Ameghino, F. 1891 D, p. 284.
- 1894 A, p. 316.
- Cope, E. D. 1879 C, p. 228.
- 1881 G, pp. 378, 379, 395.
- 1881 O.
- 1884 O, pp. 615, 694.
- 1887 N.
- 1891 L, p. 1117.
- Earle, C. 1892 C, p. 276.
- Flower and Lydekker 1891 A, p. 413.
- Haeckel, E. 1895 A, p. 546. (*Chalicotherida*.)
- Lydekker, R. 1886 A, p. 161.
- Marsh, O. C. 1877 D, p. 249. (*Moropodidæ*.)
- Marsh, O. C. 1877 E. (*Moropodidæ*.)
- 1897 B, p. 145. (*Moropodidæ*.)
- Nicholson and Lydekker 1889 A, p. 1372.
- Osborn, H. F. 1891 D.
- 1892 C.
- 1893 D, p. 43.
- Osborn and Wortman 1893 A, p. 13.
- Roger, O. 1896 A, p. 196.
- Schlosser, M. 1886 A, p. 253.
- 1886 B, p. 18.
- Steinmann and Döderlein 1890 A, p. 776.
- Wortman, J. L. 1882 B, p. 723.
- 1883 A, p. 709.
- Zittel, K. A. 1893 B, p. 308.

CHALICOTHERIUM Kaup. Type *C. goldfussi* Kaup.

- Kaup, J. J.* 1833, Oss. Foss. Darmstadt, pt. ii, p. 4.
Ami, H. M. 1891 A.
Bronn, H. G. 1838 A, p. 1201, pl. xlvii, fig. 2.
Cope, E. D. 1884 O, p. 695.
 1887 N, p. 1061.
 1889 P, p. 658.
 1891 A, p. 7.
Depéret, C. 1892 A, p. 61.
Earle, C. 1892 C, p. 276.
Filhol, H. 1891 A, p. 294.
Flower and Lydekker 1891 A, p. 413.
Gaudry, A. 1875 B.
 1877 A.
Kowalevsky, W. 1873 A, p. 175.
Lydekker, R. 1886 A, p. 162.
Marsh, O. C. 1874 A, p. 82.
 1877 E.
 1884 F, p. 172.
 1897 B, p. 143.
Nicholson and Lydekker 1889 A, p. 1373.
Osborn, H. F. 1888 D.
 1891 D, p. 911.
 1892 C.
 1892 G.

- Osborn, H. F.* 1893 D, pp. 6, 43.
 1893 F, fig. 1.
 1893 K.
Osborn and Wortman 1893 A.
Pictet, F. J. 1853 A, p. 337.
Schlosser, M. 1883 A.
 1886 B, p. 19.
 1893 B, p. 659.
Scott, W. B. 1891 A, p. 3.
 1891 D, p. 90.
Scott and Osborn 1890 B, p. 99.
Steinmann and Döderlein 1890 A, p. 778.
Trouessart, E. L. 1898 A, p. 697.
Wortman, J. L. 1883 A, p. 710.
Zittel, K. A. 1893 B, p. 312.

Chalicotherium bilobatum Cope.

- Cope, E. D.* 1889 I, p. 151.
 1891 A, p. 8, pl. iv, fig. 1.
Matthew, W. D. 1899 A, p. 58.
Osborn and Wortman 1893 A, p. 2.
Roger, O. 1896 A, p. 197.
Trouessart, E. L. 1898 A, p. 698.
 Oligocene (White River); Canada.

MOROPUS Marsh. Type *M. distans* Marsh.

- Marsh, O. C.* 1877 D, p. 249.
Flower and Lydekker 1891 A, pp. 190, 413.
Marsh, O. C. 1877 E, p. 251.
 1892 D, p. 448.
 1897 B, p. 144.
Matthew, W. D. 1899 A, p. 72.
Nicholson and Lydekker 1889 A, p. 1373.
Osborn, H. F. 1891 D, p. 911.
 1893 D, p. 43.
 1893 F, p. 122.
Osborn and Wortman 1893 A, p. 2. (Syn. of Chalicotherium.)
Scott, W. B. 1893 B, p. 1.
Wortman, J. L. 1897 B, p. 60.
Zittel, K. A. 1893 B, p. 314.

Moropus distans Marsh.

- Marsh, O. C.* 1877 D, p. 249.
King, C. 1878 A, p. 424.
Matthew, W. D. 1899 A, p. 63.
Osborn, H. F. 1893 F, p. 122.
Roger, O. 1896 A, p. 197.
Trouessart, E. L. 1898 A, p. 698.
 Miocene (John Day); Oregon.

Moropus elatus Marsh.

- Marsh, O. C.* 1877 D, p. 250.
King, C. 1878 A, p. 430.
Matthew, W. D. 1899 A, p. 72.
Osborn, H. F. 1893 F, p. 122.
Roger, O. 1896 A, p. 197.
Scott and Osborn 1890 B, p. 99, fig. 18. (Chalicotherium.)
Trouessart, E. L. 1898 A, p. 698.
Zittel, K. A. 1893 B, p. 315, fig. 255.
 Miocene (Loup Fork); Nebraska.

Moropus senex Marsh.

- Marsh, O. C.* 1877 D, p. 250.
King, C. 1878 A, p. 424.
Matthew, W. D. 1899 A, p. 63.
Osborn, H. F. 1893 F, p. 122.
Roger, O. 1896 A, p. 197.
Trouessart, E. L. 1898 A, p. 698.
 Miocene (John Day); Oregon.

SPHENOCÆLUS Osb. Type *S. uintensis* Osb.

- Osborn, H. F.* 1895 A, p. 98.
 A genus of doubtful position.

Sphenocœlus uintensis Osb.

- Osborn, H. F.* 1895 A, p. 98. figs. 12-15.

- Matthew, W. D.* 1899 A, p. 50.
Roger, O. 1896 A, p. 197.
 Eocene (Uinta); Utah.

Order AMBLYPODA Cope.

Cope, E. D. 1875 C, p. 28.

1875 M.

1877 K, p. 179.

1877 L, p. 619. (Protencephala, in part.)

1877 S. (Protoencephala, in part; Amblypoda.)

1881 J.

1882 A (Amblypoda); p. 447 (Hyodonts.)

1882 E, pp. 165, 177.

1882 Y.

1883 D.

1884 E.

1884 O, pp. 167, 373, 507.

1884 EE.

1885 F.

1885 O.

1886 C, p. 616.

1886 K, p. 721.

1887 N. (Amblypoda, Hyodonts.)

1887 S, p. 459.

1888 F.

1889 C.

1889 R, p. 877.

1891 N, p. 84.

1898 B, p. 124.

Cope and Wortman 1884 A, p. 12.

Earle, C. 1892 B.

Flower, W. H. 1876 B, xiii, p. 388.

1883 D, p. 426.

Flower and Lydekker 1891 A, p. 437.

Gadow, H. 1898 A, p. 45.

Haeckel, E. 1895 A, p. 541.

Hay, O. P. 1899 F, p. 682.

Lydekker, R. 1885 E, p. 469.

Lydekker, R. 1886 A, p. 175.

1896 B, p. 173.

Marsh, O. C. 1884 F, pp. 173, 193. (Amblydactyla.)

1892 C, p. 323. (Amblydactyla.)

1893 C, p. 324. (Amblydactyla.)

Nicholson and Lydekker 1889 A, p. 1383.

Osborn, H. F. 1888 F.

1890 D, p. 538.

1893 A, pp. 383, 459.

1893 D.

1898 A, p. 146.

1898 H.

1900 C, p. 567.

Roger, O. 1896 A, p. 155.

Rütimeyer, L. 1890 A, p. 16.

Science 1885 A, pp. 489, 490. (Amblypoda vs. Amblydactyla.)

Schlosser, M. 1887 A.

1888 A, p. 586.

1889 A.

1890 C.

1890 D.

Scott, W. B. 1886 A, p. 303.

1892 A, p. 439.

Steinmann and Döderlein 1890 A, p. 762.

Tomes, C. S. 1898 A, p. 440.

Trouessart, E. L. 1898 A, p. 712.

Weithofer, K. A. 1888 B.

Woodward, A. S. 1898 B, p. 292.

Wortman, J. L. 1882 B, p. 721.

1885 A, p. 297.

Zittel, K. A. 1893 B, pp. 207, 432, 725.

[Genera of uncertain position, possibly ancestral to the *Amblypoda*.]

SYNCONODON Osb. Type *S. sexcuspis* Osb.

Osborn, H. F. 1898 H, p. 171.

Synconodon sexcuspis Osb.

Osborn, H. F. 1898 H, pp. 171, 182, fig. 1 C.

Osborn, H. F. 1893, p. 320, pl. viii, fig. C. (No name.)

Trouessart, E. L. 1899 A, p. 1346.

Cretaceous (Laramie) Wyoming.

ECTOCONODON Osb. Type *E. petersoni* Osb.

Osborn, H. F. 1898 H, p. 171.

Ectoconodon petersoni Osb.

Osborn, H. F. 1898 H, pp. 171, 182, fig. 1 F.

Osborn, H. F. 1893, p. 320, pl. viii, fig. F. (No name.)

Trouessart, E. L. 1899 A, p. 1346.

Cretaceous (Laramie) Wyoming.

PROTOLAMBDA Osb. Type *P. hatcheri* Osb.

Osborn, H. F. 1898 H, p. 172.

Protolambda hatcheri Osb.

Osborn, H. F. 1898 H, pp. 172, 182, fig. 1 A.

Osborn, H. F. 1893, p. 320, pl. viii, fig. A. (No name.)

Trouessart, E. L. 1899 A, p. 1346.

Cretaceous (Laramie) Wyoming.

Suborder TALIGRADA Cope.

Cope, E. D. 1883 Z.

1884 O, p. 600.

1884 EE, p. 1111.

1889 R, p. 877.

1898 B, p. 124.

Flower and Lydekker 1891 A, p. 436.

Nicholson and Lydekker 1889 A, p. 1385.

Osborn, H. F. 1898 H, pp. 177, 180, 181.

Osborn and Earle 1895 A, p. 43.

Wortman, J. L. 1885 A, p. 298.

PERIPTYCHIDÆ.

Cope, E. D. 1882 D.

1882 A, pp. 446, 447.

1883 O.

1884 O, pp. 384, 385.

1884 AA, pp. 793, 794.

1887 N, p. 986.

1888 K, p. 162.

1889 C, p. 177.

1897 B.

Earle, C. 1893 D, p. 51.

Haeckel, E. 1895 A, p. 534. (Periptychida.)

Lydekker, R. 1886 A, p. 172.

Matthew, W. D. 1897 C, pp. 262, 294, 295.

1899 A, p. 29.

Nicholson and Lydekker 1889 A, pp. 1323, 1379.

Osborn, H. F. 1898 A, p. 146.

1898 H, p. 181.

Osborn and Earle 1895 A, pp. 47, 52, 61.

Pavlow, M. 1887 A, p. 354.

Roger, O. 1896 A, p. 164.

Schlosser, M. 1886 B.

1888 A, p. 585.

1890 C.

Scott, W. B. 1892 A, p. 428.

Steinmann and Döderlein 1890 A, p. 750.

Zittel, K. A. 1893 B, p. 216.

PERIPTYCHINÆ.

Osborn and Earle 1895 A, p. 52.

Matthew, W. D. 1897 C, pp. 295, 296.

Osborn, H. F. 1898 H, p. 182.

Trouessart, E. L. 1898 A, p. 722.

PERIPTYCHUS Cope. Type *P. carinidens* Cope.

Cope, E. D. 1881 H, p. 484.

1881 H, p. 487. (Catathlæus, type *C. rhabdodon*.)

1881 N.

1881 U. (Catathlæus.)

1882 A, p. 447.

1882 E, p. 158.

1882 F, p. 96. (Periptychus, Catathlæus.)

1882 DD.

1883 G.

1883 O.

1883 AA.

1884 E.

1884 O, pp. 382, 387.

1884 AA, pp. 794, 796.

1884 EE, p. 1120.

1887 I, p. 658.

1894 E, p. 868.

Earle, C. 1893 D.

Flower and Lydekker 1891 A, p. 439.

Lydekker, R. 1886 A, p. 172.

Matthew, W. D. 1899 A, p. 28.

Nicholson and Lydekker 1889 A, p. 1379.

Osborn, H. F. 1888 H.

1890 D, p. 532.

1893 B, p. 326.

1898 H, pp. 181, 186.

Osborn and Earle 1895 A, p. 53.

Pavlow, M. 1887 A, p. 354.

Schlosser, M. 1886 B.

Scott, W. B. 1892 A, p. 428.

Steinmann and Döderlein 1890 A, p. 750.

Wortman, J. L. 1886 A, p. 470.

Zittel, K. A. 1893 B, p. 217.

Cope, E. D. 1888 CC, p. 305 (P. carinidens); pp.

305, 354 (P. brabensis).

Matthew, W. D. 1897 C, pp. 264, 297.

1899 A, p. 29.

Osborn, H. F. 1898 H, p. 182.

Osborn and Earle 1895 A, p. 55. (P. brabensis.)

Roger, O. 1896 A, p. 165.

Trouessart, E. L. 1898 A, p. 722.

Eocene (Torrejon); New Mexico.

Periptychus coarctatus Cope.

Cope, E. D. 1883 Q, p. 168.

1884 K, p. 309.

1884 O, explan., pl. xxixd, figs. 7, 8.

1884 AA, p. 302, fig. 10.

1885 J, p. 387.

1888 CC, pp. 305, 354. (P. coarctatus, C. brabensis.)

Matthew, W. D. 1897 C, p. 296.

1899 A, p. 28.

Osborn, H. F. 1898 H, p. 182.

Osborn and Earle 1895 A, p. 54.

Roger, O. 1896 A, p. 165. (P. coarctatus, P. brabensis.)

Eocene (Puerco); New Mexico.

Periptychus rhabdodon Cope.

Cope, E. D. 1881 U, p. 829. (Catathlæus.)

1881 H, p. 487. (Catathlæus.)

1882 C, p. 465.

1883 G, p. 564, pl. ii, figs. 2, 3.

1884 K, p. 309.

1884 O, p. 391, pl. xxiiif; pl. xxiiig, figs. 1-11; pl. lvijf, figs. 1, 2.

1884 AA, p. 794, figs. 2, 6-9.

1887 I, p. 658.

1887 S, p. 268, fig. 44.

1888 CC, p. 305.

Lydekker, R. 1886 A, p. 174, figs. 24, 25.

Matthew, W. D. 1897 C, pp. 264, 296, 320.

1899 A, p. 29.

Osborn, H. F. 1890 D, p. 533, diagrams 6, 7.

Periptychus carinidens Cope.

Cope, E. D. 1881 N, p. 337.

1881 H, p. 484.

1883 M, p. 561.

1884 O, pp. 403, pl. xxiiid, figs. 14, 15; pl. xxiv, fig. 5; pl. xxva, fig. 16.

1884 AA, p. 801.

Osborn, H. F. 1898 H, p. 182.
 Osborn and Earle 1895 A, p. 53.
 Pavlow, M. 1887 A, p. 359, figs. 2, 5a.
 Roger, O. 1896 A, p. 165.

Schlosser, M. 1886 B, p. 35.
 Trouessart, E. L. 1898 A, p. 722.
 Zittel, K. A. 1893 B, p. 218, figs. 152, 153, 156, 157.
 Eocene (Torrejon); New Mexico.

ECTOCONUS Cope. Type *Periptychus ditrigonus* Cope.

Cope, E. D. 1884 AA, p. 796.
 1884 E, p. 313.
 1884 O, p. xxxv.
 1888 CC, p. 355.

Osborn, H. F. 1893 B, p. 325.
 1898 H, p. 173.

Osborn and Earle 1895 A, p. 56.

Schlosser, M. 1886 B, p. 37.

Zittel, K. A. 1893 B, p. 218.

Ectoconus ditrigonus Cope.

Cope, E. D. 1882 C, p. 465. (*Periptychus*).
 1883 Q, p. 168. (*Conoryctes*).
 1883 EE, p. 968. (*Conoryctes*).

Cope, E. D. 1884 A, p. 796. (*Ectoconus*).
 1884 O, p. xxxv (*Ectoconus*); p. 404, pl. xxxg, fig. 12 (*Periptychus*); explan. pl. xxixd, figs. 2-6 (*Conoryctes*).
 1884 AA, p. 797, figs. 4, 5.
 1888 CC, p. 356.
 Matthew, W. D. 1897 C, pp. 264, 320.
 1899 A, p. 28.
 Osborn, H. F. 1898 H, p. 182.
 Osborn and Earle 1895 A, p. 56.
 Roger, O. 1896 A, p. 165.
 Schlosser, M. 1886 B, p. 37, pl. vi, figs. 30, 31.
 Trouessart, E. L. 1898 A, p. 723.
 Eocene (Puerco); New Mexico.

ANISONCHINÆ.

Osborn and Earle 1895 A, p. 52.
 Matthew, W. D. 1897 C, pp. 295, 297.

Osborn, H. F. 1898 H, p. 182.
 Trouessart, E. L. 1898 A, p. 720.

HAPLOCONUS Cope. Type *H. lineatus* Cope.

Cope, E. D. 1882 V, p. 417.
 1882 C, p. 466.
 1882 F, p. 96.
 1884 O, pp. 386, 415.
 1884 AA, p. 795.
 1887 I, p. 657.

Lydekker, R. 1886 A, p. 175.

Matthew, W. D. 1897 C, p. 298.

Osborn and Earle 1895 A, p. 58.

Pavlow, M. 1887 A.

Schlosser, M. 1886 B, p. 37.

Steinmann and Döderlein 1890 A, p. 750.

Zittel, K. A. 1893 B, p. 216.

Haploconus angustus Cope.

Cope, E. D. 1881 U, p. 831. (*Miocænus*).
 1881 H, pp. 490, 491. (*Miocænus*).
 1882 V, p. 418.
 1884 O, p. 416, pl. lviif, fig. 6.
 1887 I.
 1888 CC, p. 304.

Matthew, W. D. 1897 C, p. 298. (Syn. of *H. lineatus*.)

Roger, O. 1896 A, p. 164 (*H. angustus*); p. 250 (*Tricentus angustus*).

Trouessart, E. L. 1898 A, p. 720. (Syn. of *H. lineatus*.)

Eocene (Torrejon); New Mexico.

Haploconus corniculatus Cope.

Cope, E. D. 1888 CC, p. 349.

Matthew, W. D. 1897 C, p. 298.
 1899 A, p. 29.

Roger, O. 1896 A, p. 165.

Trouessart, E. L. 1898 A, p. 720.

Eocene (Torrejon); New Mexico.

Haploconus lineatus Cope.

Cope, E. D. 1882 V, p. 417.
 1882 C, p. 466. (*H. xiphodon*).
 1884 K, p. 309.
 1884 O, pp. 416, 417, pl. xxve, figs. 1-4 (*H. lineatus*); pp. 416, 420, pl. xxve, figs. 5, 6 (*H. xiphodon*).
 1884 AA, p. 804, fig. 13a, 13b (*H. lineatus*) fig. 13c (*H. xiphodon*).
 1887 I, p. 658.
 1888 CC, p. 304. (*H. lineatus*, *H. xiphodon*.)

Lydekker, R. 1886 A, p. 175.

Matthew, W. D. 1897 C, pp. 264, 298.

1899 A, p. 29.

Osborn, H. F. 1893 B, p. 325.

Osborn and Earle 1895 A, p. 59.

Roger, O. 1896 A, p. 165. (*H. lineatus*, *H. xiphodon*.)

Schlosser, M. 1886 B, p. 37, pl. v, fig. 27.

Scott, W. B. 1892 A, p. 429. (*H. xiphodon*.)

Zittel, K. A. 1893 B, p. 216, fig. 154.

Eocene (Torrejon); New Mexico.

It is not improbable that this species will prove to be identical with *H. angustus*.

ANISONCHUS Cope. Type *A. sectorius* Cope.

Cope, E. D. 1881 H, pp. 487, 488.
 1882 E, p. 178.
 1882 F, p. 96.
 1883 AA, p. 408.
 1884 E, p. 314.

Cope, E. D. 1884 O, pp. 386, 408.
 1884 AA, pp. 795, 803.
 1887 I, p. 657.

Matthew, W. D. 1897 C, p. 298.

Nicholson and Lydekker 1889 A, p. 1380.

- Osborn and Earle 1895 A, p. 60.
 Pavlow, M. 1887 A.
 Schlosser, M. 1886 B, p. 37.
 Scott, W. B. 1892 A, p. 428.
 Trouessart, E. L. 1898 A, p. 721.
 Zittel, K. A. 1893 B, p. 216.

Anisonchus gillianus Cope.

- Cope, E. D.* 1882 C, p. 467. (Haploconus.)
 1882 AA, p. 686. (Haploconus.)
 1884 O, pp. 409, 411, pl. xxve, fig. 7 (A. gillianus, A. apiculatus); pl. xvj, figs. 10, 11 (H. gillianus).
 1884 AA, p. 803.
 1888 CC, pp. 305, 352. (Hemithlæus apiculatus, A. gillianus.)
Matthew, W. D. 1897 C, p. 299.
 1899 A, p. 28.
Roger, O. 1896 A, p. 165. (A. gillianus, Hemithlæus apiculatus.)
Scott, W. B. 1892 A, p. 428.
Trouessart, E. L. 1898 A, p. 721.
 Eocene (Puerco); New Mexico.

Anisonchus sectorius Cope.

- Cope, E. D.* 1881 H, p. 488.
 1881 H, p. 490. (Mioclenus mandibularis.)
 1881 U, p. 831. (Mioclenus sectorius, M. mandibularis.)
 1882 C, p. 467.
 1884 K, p. 309.
 1884 O, pp. 325, 339, pl. lviif, fig. 7 (Mioclenus mandibularis); pp. 409, 413, pl. xxve, figs. 5, 6, 8 (Anisonchus sectorius).
 1884 AA, p. 803, fig. 12.
 1884 CC, p. 305, 351. (A. sectorius, A. mandibularis.)
Matthew, W. D. 1897 C, pp. 298, 299.
 1899 A, p. 29.
Osborn and Earle 1895 A, p. 61. (A. sectorius, A. mandibularis.)
Pavlow, M. 1887 A, fig. 9.
Roger, O. 1896 A, p. 164. (A. sectorius, A. mandibularis.)
Schlosser, M. 1886 B, p. 37, pl. vi, fig. 26.
 1887 B, p. 221. (Mioclenus mandibularis.)
Scott, W. B. 1892 A, p. 428.
Trouessart, E. L. 1898 A, p. 721.
 Eocene (Torrejon); New Mexico.

Zetodon Cope. Type *Z. gracilis* Cope.

- Cope, E. D.* 1883 Q, p. 169.
 1883 EE.
 1884 O, explan. pl. xxixd, fig. 9.
 1884 AA, pp. 795, 804.
Matthew, W. D. 1897 C, p. 299.
Osborn, H. F. 1893 B, p. 325.
Pavlow, M. 1887 A, p. 302.
Schlosser, M. 1886 B, p. 37.
Zittel, K. A. 1893 B, p. 218.

According to Matthew this genus is probably founded on crushed jaws of small specimens of *Anisonchus*.

Zetodon gracilis Cope.

- Cope, E. D.* 1883 Q, p. 169.
 1883 EE.
 1884 O, explan. pl. xxixd, fig. 9.
 1884 AA, pp. 802, 805, fig. 11 d, d'.
 1888 CC, p. 305.
Matthew, W. D. 1897 C, p. 299.
 1899 A, p. 28.
Roger, O. 1896 A, p. 165.
 Eocene (Puerco); New Mexico.

Hemithlæus Cope. Type *H. kowalevskianus* Cope.

- Cope, E. D.* 1882 DD, p. 832.
 1884 O, pp. 386, 405.
 1884 AA, pp. 795, 803.
 1884 K, p. 309.
 1887 I, p. 657.
 1888 CC, p. 352.
Nicholson and Lydekker 1889 A, p. 1380.
Osborn and Earle 1895 A, p. 60.
Pavlow, M. 1887 A.
Schlosser, M. 1886 B, p. 37.
Scott, W. B. 1892 A, p. 428.
Zittel, K. A. 1893 B, p. 217.

Hemithlæus kowalevskianus Cope.

- Cope, E. D.* 1882 DD, p. 832.
 1882 DD, p. 832. (Anisonchus confusus, in part.)

- Cope, E. D.* 1884 O, p. 405, pl. xxv, figs. 6, 7 (H. kowalevskianus); p. 409, in part,? pl. xxiv, fig. 6a-c (Anisonchus confusus).
 1884 AA, p. 802, fig. 11c.
 1888 CC, pp. 305, 353, fig. 11,
Matthew, W. D. 1897 C, pp. 264, 297, fig. 11.
 1899 A, p. 28.
Osborn and Earle 1895 A, p. 60, fig. 18.
Roger, O. 1896 A, p. 164. (H. kowalevskianus, Anisonchus confusus.)
Scott, W. B. 1892 A, p. 428. (Anisonchus confusus.)
Trouessart, E. L. 1898 A, p. 721. (H. kowalevskianus.)
Zittel, K. A. 1898 A, p. 721, fig. 155. (H. kowalevskianus.)
 Eocene (Puerco); New Mexico.

Conacodon Matth. Type *Haploconus entoconus* Cope.

- Matthew, W. D.* 1897 C, p. 298.
Trouessart, E. L. 1898 A, p. 721.

Conacodon cophater (Cope).

- Cope, E. D.* 1884 K, p. 321. (Anisonchus.)
 1888 CC, pp. 304, 349. (Haploconus.)

- Matthew, W. D.* 1897 C, pp. 264, 298.
 1899 A, p. 28.
Osborn, H. F. 1898 H, p. 182.
Roger, O. 1896 A, p. 164. (Haploconus.)
Trouessart, E. L. 1898 A, p. 721.
 Eocene (Puerco); New Mexico.

Conacodon entoconus (Cope.)

- Cope, E. D.* 1882 AA, p. 686. (Haploconus.)
 1882 DD, p. 832. (Anisonchus coniferus, in part.)
 1884 O, pp. 416, 421, pl. xxxvf, figs. 4, 5 (Haploconus); p. 409, pl. xxivg, fig. 6 (Anisonchus coniferus).
 1884 AA, p. 804 (Haploconus); p. 803, fig. 12c (Anisonchus coniferus).
 1888 CC, p. 304 (Haploconus); p. 305 (Anisonchus coniferus).

- Matthew, W. D. 1897 C, pp. 264, 298.
 1899 A, p. 28.
 Osborn, H. F. 1898 H, p. 182.
 Pavlow, M. 1887 A, fig. 10. (Haploconus.)
 Roger, O. 1896 A, p. 165.
 Schlosser, M. 1886 B, p. 37, pl. vi, fig. 28. (Haploconus.)
 Scott, W. B. 1892 A, p. 428. (Haploconus.)
 Eocene (Puerco); New Mexico.

PANTOLAMBIDIDÆ.

- Cope, E. D.* 1883 Z.
 1884 O, p. 601.
 1888 K, p. 162.
 1897 B, p. 336.
 Haeckel, E. 1895 A, pp. 530, 542. (Pantolambdina.)
 Matthew, W. D. 1897 C, p. 294.

- Nicholson and Lydekker 1889 A, p. 1385.
 Osborn, H. F. 1898 H, p. 182.
 Roger, O. 1896 A, p. 155.
 Steinmann and Döderlein 1890 A, p. 762.
 Zittel, K. A. 1893 B, p. 434.

PANTOLAMBDA Cope. Type *P. bathmodon* Cope.

- Cope, E. D.* 1882 V, p. 418.
 Ameghino, F. 1896 A, p. 445.
Cope, E. D. 1882 F, p. 96.
 1883 Z.
 1884 O, p. 601.
 1884 EE, pp. 1111, 1120.
 1885 A, p. 478.
 1888 CC, p. 360.
 1889 C.
 Earle, C. 1892 A, pp. 150, 153.
 1892 B.
 Matthew, W. D. 1897 C, pp. 308, 319.
 Nicholson and Lydekker 1889 A, p. 1385.
 Osborn, H. F. 1888 H.
 1893 E.
 1897 C, p. 1013, fig. 14.
 1898 A, p. 146.
 1898 F, p. 91.
 1898 H, pp. 173, 183, 184.
 1898 M, pp. 585, 587.
 Osborn and Earle 1895 A, p. 43.
 Osborn and Wortman 1892 A, p. 122.
 Schlosser, M. 1888 A, p. 585.
 Scott, W. B. 1892 A, p. 439.
 Zittel, K. A. 1893 B, p. 435.

Pantolambda bathmodon Cope.

- Cope, E. D.* 1882 V, p. 418.
 1883 M, p. 557.

- Cope, E. D.* 1883 Z, p. 406.
 1884 O, p. 603, pl. xxixb; pl. xxixc, figs. 3-7.
 1884 EE, p. 1111, figs. 3-5.
 1885 F, p. 55.
 1887 S, p. 275, pl. vii, fig. 2.
 1888 F, p. 82, fig. 1.
 1888 CC, pp. 305, 360.
 1889 C, p. 237.
 Matthew, W. D. 1897 C, p. 320.
 1899 A, p. 29.
 Osborn, H. F. 1898 H, pp. 181, 182, 184, figs. 8-13.
 Osborn and Earle 1895 A, p. 43, figs. 14-16.
 Roger, O. 1896 A, p. 155.
 Trouessart, E. L. 1898 A, p. 712.
 Eocene (Torrejon); New Mexico.

Pantolambda cavitictus Cope.

- Cope, E. D.* 1883 Q, p. 169.
 1883 EE.
 1884 O, explan. pl. xxixd, fig. 1.
 1884 EE, p. 1113, fig. 6.
 1888 F, p. 83, fig. 2.
 1888 CC, pp. 305, 360.
 Matthew, W. D. 1897 C, p. 320.
 1899 A, p. 29.
 Osborn, H. F. 1898 H, pp. 172, 179, 183, figs. 2, 7, 13.
 Roger, O. 1896 A, p. 155.
 Trouessart, E. L. 1898 A, p. 712.
 Eocene (Torrejon); New Mexico.

Suborder PANTODONTA Cope.

- Cope, E. D.* 1873 F, pp. 40, 67.
 1875 C, p. 28.
 1875 M.
 1877 K, p. 182.
 1877 S.
 1882 A.
 1882 E, p. 165.
 1883 M, p. 558.
 1883 Z.
 1884 O, pp. 379, 510, 514, 601.
 1884 EE.

- Cope, E. D.* 1885 O.
 1898 B, p. 124.
 Lydekker, R. 1886 A, p. 176. (Coryphodontia.)
 Marsh, O. C. 1884 F, p. 193. (Coryphodontia.)
 1893 C, p. 323. (Coryphodontia.)
 Nicholson and Lydekker 1889 A, p. 1385. (Coryphodontia.)
 Osborn, H. F. 1893 A, p. 459.
 1898 H, pp. 177, 180, 188.
 Science 1885 A, p. 490.
 Scott, W. B. 1886 A, p. 303.

CORYPHODONTIDÆ.

Marsh, O. C. 1876 D, p. 428.

Cope, E. D. 1872 EE, p. 279. (Bathmodontidæ.)

1873 E, pp. 563, 585. (Bathmodontidæ.)

1873 K. (Bathmodontidæ.)

1882 E, p. 165.

1882 M.

1884 E.

1884 L, p. 324.

1884 O, p. 515.

1884 EE, p. 1192.

1888 F, p. 80.

1893 H.

Earle, C. 1892 B.

Flower and Lydekker 1889 A, p. 438.

Haeckel, E. 1895 A, p. 542. (Coryphodontida.)

Lydekker, R. 1886 A, p. 176.

Marsh, O. C. 1877 A.

1877 E.

1893 C, p. 323.

1893 H.

Matthew, W. D. 1899 A, p. 33.

Nicholson and Lydekker 1889 A, p. 1386.

Osborn, H. F. 1888 H.

1898 H, p. 182.

Roger, O. 1896 A, p. 155.

Rütimeyer, L. 1888 A, p. 13.

Schlosser, M. 1888 A, p. 586.

Steinmann and Döderlein 1890 A, p. 763.

Trouessart, E. L. 1898 A, p. 712.

Zittel, K. A. 1893 B, p. 435.

CORYPHODON Owen. Type *C. eocænus* Owen.

Owen, R. 1845 B, p. 607 pl. cxxxv.

Ameghino, F. 1896 A, p. 445.

Amer. Jour. Science 1873 A.

Cope, E. D. 1872 A. (Bathmodon.)

1872 G, p. 350 (Bathmodon); p. 353 (Loxolophodon).

1872 J, p. 417 (Bathmodon, type *B. radians* Cope); p. 420 (Loxolophodon, type *Bathmodon semicinctus*).

1872 S. (Loxolophodon, in part.)

1872 T, p. 542. (Metalophodon, type *M. armatus* Cope.)

1872 AA. (Bathmodon.)

1872 LL. (Metalophodon.)

1873 A. (Bathmodon.)

1873 D, p. 3. (Bathmodon, Metalophodon.)

1873 E, p. 586 (Bathmodon); pp. 586, 589 (Metalophodon).

1873 F, p. 67 (Bathmodon); pp. 67, 71 (Metalophodon).

1873 K. (Bathmodon, Metalophodon.)

1874 M. (Bathmodon.)

1875 C, pp. 24, 29. (Bathmodon.)

1875 M. (Bathmodon.)

1876 D, p. 64. (Bathmodon.)

1877 K, p. 187.

1877 L.

1877 S.

1878 T.

1882 E, p. 145 (Coryphodon); pp. 165, 175 (Metalophodon); pp. 165, 167 (Ectacodon, type *E. cinctus*); pp. 165, 167 (Manteodon, type *M. subquadratus*).

1882 H, p. 294. (Coryphodon, Bathmodon.)

1882 M. (Coryphodon, Metalophodon, Manteodon.)

1883 U.

1883 Z. (Bathmodon.)

1884 O, pp. 513, 517, 521 (Coryphodon); pp. 517, 544 (Bathmodon); pp. 517, 554 (Metalophodon); p. 517 (Manteodon); pp. 517, 519 (Ectacodon).

1884 EE, pp. 1117, 1194 (Coryphodon); p. 1194 (Ectacodon, Manteodon).

1885 A, p. 478. (Bathmodon.)

1887 S. (Bathmodon, Metalophodon.)

1888 F, p. 85. (Coryphodon, Bathmodon.)

Cope, E. D. 1889 C.

1893 H.

Earle, C. 1892 A, pp. 150, 155 (Metalophodon=Coryphodon); p. 165 (Manteodon); p. 166 (Ectacodon).

1892 B. (Coryphodon, Manteodon.)

Flower and Lydekker 1891 A, p. 437.

Gervais, P. 1859 A, p. 127.

Hébert, Ed. 1856 A.

Huxley, T. H. 1870 A.

L. P. B. 1885 A, p. 190.

Lydekker, R. 1886 A, p. 177.

Maack, G. A. 1865 A, p. 7.

Marsh, O. C. 1876 D.

1877 A.

1877 H.

1878 H.

1884 F, p. 225. (Loxolophodon=Coryphodon.)

1893 C.

1893 H, p. 321.

Nicholson and Lydekker 1889 A, p. 1387. (Coryphodon, Ectacodon, Manteodon.)

Osborn, H. F. 1890 D, p. 538.

1897 C, p. 1014.

1898 F.

1898 H, pp. 173, 191.

1898 M, p. 585.

Osborn and Wortman 1892 A, pp. 118, 120, 121, figures.

Owen, R. 1846 B, p. 299.

1848 A, p. 126.

1858 B, vol. i, p. 78.

1860 E, p. 322.

1878 D, p. 216, pl. xi.

1886 A.

Pictet, F. J. 1853 A, p. 304.

Rütimeyer, L. 1862 A.

Scott, W. B. 1892 A, p. 439.

Steinmann and Döderlein 1890 A, p. 763.

Trouessart, E. L. 1898 A, p. 712.

Vasseur, G. 1875 A.

Wortman, J. L. 1893 B, p. 426.

Zittel, K. A. 1893 B, p. 438. (Coryphodon, Ectacodon, Manteodon.)

Coryphodon anax Cope.

- Cope, E. D.* 1882 E, p. 168.
 1882 H, p. 294. (*Bathmodon pachypus*.)
 1883 U, p. 68. (*Bathmodon pachypus*.)
 1884 O, pp. 523, 537, pl. xlvb; pl. xlive; pl. xlvf (*C. anax*); p. 549, pl. xlvf; pl. xlive, figs. 7-13; pl. xlvf (*Bathmodon pachypus*).
 1884 EE, p. 1116, figs. 9, 23 (*C. anax*); p. 1194, figs. 14, 15 (*Bathmodon pachypus*).
 1893 H, p. 251.
Earle, C. 1892 A, pp. 151, 152, 155, 156, 164, fig. 2, H.
Matthew, W. D. 1899 A, p. 33. (Syn. of *C. lobatus*.)
Osborn, H. F. 1898 H, pp. 191, 197, 198, 204, in part. (Syn. of *C. lobatus*.)
Osborn and Wortman 1892 A, pp. 83, 119, fig. 15.
Roger, O. 1896 A, p. 155.
Trouessart, E. L. 1898 A, p. 714.
Woodward, A. S. 1898 B, p. 293.
Zittel, K. A. 1893 B, p. 438, fig. 359 (*Coryphodon*); p. 438 (*Ectacodon*).
 Eocene (Wasatch); Wyoming.
 See remarks under *C. lobatus*.

Coryphodon armatus (Cope).

- Cope, E. D.* 1872 T, p. 543. (*Metalophodon*.)
 1872 LL. (*Metalophodon*.)
 1873 E, p. 589. (*Metalophodon*.)
 1873 F, p. 71. (*Metalophodon*.)
 1873 K. (*Metalophodon*.)
 1877 K, p. 250. (*Metalophodon*.)
 1884 O, p. 555, pl. xlix, figs. 1-7. (*Metalophodon*.)
 1884 EE, p. 1202. (*Metalophodon*.)
 1893 H, p. 251. (*Metalophodon*.)
Earle, C. 1892 A, p. 151 (*Metalophodon*); p. 159 ("Metalophodon").
Matthew, W. D. 1899 A, p. 33.
Osborn, H. F. 1898 H, pp. 191, 194, 197, 208, figs. 15, 16, 17, 25.
Roger, O. 1896 A, p. 156.
Trouessart, E. L. 1898 A, p. 713.
 Eocene (Wasatch); Wyoming.

Coryphodon cinctus (Cope).

- Cope, E. D.* 1882 E, p. 167. (*Ectacodon*.)
 1882 M. (*Ectacodon*.)
 1884 O, p. 520, pl. xlixa, fig. 6. (*Ectacodon*.)
 1884 EE, p. 1197, fig. 16. (*Ectacodon*.)
 1888 F, p. 84, fig. 3. (*Ectacodon*.)
 1889 C, p. 238, figs. 63, 64. (*Ectacodon*.)
Earle, C. 1892 A, p. 166, fig. 2, G. (*Ectacodon*.)
Matthew, W. D. 1899 A, p. 33.
Osborn, H. F. 1898 H, pp. 191, 197, 198, 202, figs. 15, 16.
Roger, O. 1896 A, p. 156. (*Ectacodon*.)
Trouessart, E. L. 1898 A, p. 714. (*Ectacodon*.)
Zittel, K. A. 1893 B, p. 438, fig. 360.
 Eocene (Wasatch); Wyoming.

Coryphodon curvicristis Cope.

- Cope, E. D.* 1882 E, pp. 170, 172.
 1884 O, pp. 524, 533, pl. xlive.
 1884 EE, pp. 1116, 1201, figs. 9, 22.
Earle, C. 1892 A, pp. 151, 156, 163.
Matthew, W. D. 1899 A, p. 33.
Osborn, H. F. 1898 H, pp. 191, 197, 199, 207.

- Roger, O.* 1896 A, p. 155.
Trouessart, E. L. 1898 A, p. 713.
 Eocene (Wasatch); Wyoming.

Coryphodon cuspidatus Cope.

- Cope, E. D.* 1875 C, pp. 29, 30. (*Bathmodon*.)
 1877 K, p. 206, pl. xlvf, fig. 1.
 1881 D, p. 194.
 1882 E, p. 170.
 1884 O, pp. 523, 525.
 1884 EE, pp. 1116, 1202, fig. 9.
 1893 H, p. 251.
Earle, C. 1892 A, pp. 155, 156, 161 (*C. cuspidatus*); p. 162, "No. 276" (*C. obliquus*).
Matthew, W. D. 1899 A, p. 33. (Syn. of *C. elephantopus*.)
Osborn, H. F. 1898 H, pp. 191, 197, 199, 206.
Roger, O. 1896 A, p. 155.
Trouessart, E. L. 1898 A, p. 713.
 Eocene (Wasatch); New Mexico, Wyoming.

Coryphodon elephantopus Cope.

- Cope, E. D.* 1874 O, p. 10. (*Bathmodon*.)
 1875 C, p. 29. (*Bathmodon*.)
 1875 F, p. 95, pls. v, vi. (*Bathmodon*.)
 1877 K, pp. 206, 217, pl. i, figs. 5, 6; pls. ii, iii, iii; pl. liv, fig. 1.
 1882 E, pp. 170, 171.
 1884 O, pp. 523, 531, pl. xxixc.
 1884 EE, p. 1193, figs. 12, 13, 20, 21.
 1887 S, p. 269, figs. 45, 46.
 1889 C, p. 159, figure.
 1891 L, p. 1118.
 1893 H, p. 251.
Earle, C. 1892 A, pp. 151, 155, 160, fig. 2, D.
 1892 B.
King, C. 1878 A, p. 377.
Lydekker, R. 1886 A, p. 177, fig. 27.
Matthew, W. D. 1899 A, p. 33.
Osborn, H. F. 1898 H, pp. 191, 196, 197, 199, figs. 19, 20.
Osborn and Wortman 1892 A, pp. 83, 119.
Roger, O. 1896 A, p. 155.
Scott, W. B. 1886 A, p. 304.
Trouessart, E. L. 1898 A, p. 713.
Zittel, K. A. 1893 B, p. 436, fig. 357.
 Eocene (Wasatch); New Mexico, Wyoming.

Coryphodon hamatus Marsh.

- Marsh, O. C.* 1876 D, p. 426, figs. 1, 2.
Cope, E. D. 1891 L.
Earle, C. 1892 A, pp. 151, 155, 156, 162.
King, C. 1878 A, p. 377.
Lydekker, R. 1886 A, p. 176.
Marsh, O. C. 1877 A, p. 81, pl. iv.
 1884 F, figs. 55, 56, 150, 151.
 1885 B, figs. 92, 93, 103, 132, 132.
 1893 C, p. 325, pl. vi.
 1893 H, pl. xviii, text fig. 1.
Matthew, W. D. 1899 A, p. 33.
Osborn, H. F. 1898 H, pp. 191, 197, 199, 214, in part.
Roger, O. 1896 A, p. 155.
Trouessart, E. L. 1898 A, p. 713.
Woodward, A. S. 1898 B, p. 293, figs. 166-168.
Zittel, K. A. 1893 B, p. 437, figs. 356, 358.
 Eocene (Wasatch); Wyoming.

Coryphodon latidens Cope.

- Cope, E. D.* 1875 C, p. 29. (Bathmodon.)
 1877 K, pp. 206, 214.
 1882 E, p. 170.
 1884 O, p. 523.
 1884 EE, p. 1200, fig. 22.
 1887 Q.
 1888 F, p. 86, fig. 4.
 1889 C, p. 241, fig. 25.
 1893 H, p. 251.
Earle, C. 1892 A, pp. 151, 160. (Syn.? of *C. elephantopus*.)
King, C. 1878 A, p. 377.
Matthew, W. D. 1899 A, p. 33.
Osborn, H. F. 1898 H, pp. 191, 197, 199, 206.
Roger, O. 1896 A, p. 155.
Trouessart, E. L. 1898 A, p. 713. (Syn.? of *C. elephantopus*.)
 Eocene (Wasatch); New Mexico, Wyoming.

Coryphodon latipes Cope.

- Cope, E. D.* 1873 F, pp. 68, 70. (Bathmodon.)
 1873 E, pp. 587, 588. (Bathmodon.)
 1882 E, p. 170.
 1884 O, pp. 523, 526, pls. xxixa, figs. 4, 5; pl. xlviii, figs. 7-14.
 1893 H, p. 251.
Earle, C. 1892 A, pp. 150, 151.
Matthew, W. D. 1899 A, p. 33.
Osborn, H. F. 1898 H, pp. 191, 197, 199.
Roger, O. 1896 A, p. 155.
Trouessart, E. L. 1898 A, p. 713.
 Eocene; New Mexico.

Coryphodon lobatus Cope.

- Cope, E. D.* 1877 K, pp. 205, 209, pl. xlvii, figs. 2-10.
 1882 E, p. 170.
 1884 O, p. 523.
Earle, C. 1892 A, pp. 151, 155, 164. (Syn. of *C. anax*.)
Matthew, W. D. 1899 A, p. 33.
Osborn, H. F. 1898 H, pp. 191, 197, 198; p. 204 in part.
Trouessart, E. L. 1898 A, p. 714. (Syn. of *C. anax*.)
 Eocene; New Mexico, Wyoming.
Earle (1892 A, p. 164) makes this species a synonym of *C. anax*. Should it result that the specimens described as *C. anax*, *C. pachypus*, and *C. lobatus* belong to one species, this must bear the name *C. lobatus*, this name having priority of publication. This course has been followed by *Osborn* 1898 H, p. 204.

Coryphodon marginatus Cope.

- Cope, E. D.* 1882 E, pp. 170, 174.
 1884 O, pp. 524, 535, pl. xlvii, fig. 5.
Earle, C. 1892 A, pp. 151, 163. (Syn.? of *C. curvicitis*.)
Matthew, W. D. 1899 A, p. 33.
Osborn, H. F. 1898 H, pp. 191, 197, 198, 210.
Roger, O. 1896 A, p. 155.
Trouessart, E. L. 1898 A, p. 714.
 Eocene (Wasatch); Wyoming.

Coryphodon molestus Cope.

- Cope, E. D.* 1874 D, p. 9. (Bathmodon.)

- Cope, E. D.* 1874 D, p. 8 (Bathmodon simus); p. 9 (B. lomas).
 1875 C, p. 29. (Bathmodon molestus, simus, lomas.)
 1875 F, p. 95. (Bathmodon molestus, lomas, simus.)
 1877 K, pp. 206, 229, pl. lvi; pl. lvii, figs. 1, 2 (C. molestus); pp. 206, 225, pl. lv (C. simus).
 1882 E, pp. 170, 171. (C. molestus, C. simus.)
 1884 O, p. 524 (C. molestus); pp. 524, 532 (C. simus).
 1884 EE, p. 1197. (C. molestus.)
 1893 H, p. 251. (C. molestus, C. simus.)
Earle, C. 1892 A, pp. 151, 155, 160. (Syn. of *C. elephantopus*.)
Matthew, W. D. 1899 A, p. 33. (Syn. of *C. latidens*.)
Osborn, H. F. 1898 H, pp. 191, 197, 199, 208, fig. 25. (Syn. of *C. armatus*.)
Trouessart, E. L. 1898 A, p. 714. (Syn. of *C. elephantopus*.)
 Eocene (Wasatch); New Mexico.

Coryphodon obliquus Cope.

- Cope, E. D.* 1877 K, pp. 205, 207, pl. xlvii, figs. 1-7.
 1882 E, p. 170.
 1884 O, p. 523.
 1893 H, p. 251.
Earle, C. 1892 A, pp. 151, 155, 156, 162. (Except specimen No. 276.)
Matthew, W. D. 1899 A, p. 33. (Syn. of *C. elephantopus*.)
Osborn, H. F. 1898 H, pp. 191, 196, 197, 199. (Syn. of *C. elephantopus*.)
Osborn and Wortman 1892 A, pp. 83, 119.
Roger, O. 1896 A, p. 155.
Trouessart, E. L. 1898 A, p. 713.
 Eocene (Wasatch); New Mexico.

Coryphodon radians Cope.

- Cope, E. D.* 1872 J, p. 418. (Bathmodon.)
 1872 G, p. 351 (Bathmodon radians); p. 352 (B. semicinctus).
 1872 AA. (Bathmodon.)
 1873 E, p. 587. (Bathmodon.)
 1873 F, p. 68. (Bathmodon.)
 1875 C, p. 29. (Bathmodon.)
 1877 K, pp. 206, 211. (Coryphodon.)
 1881 D, p. 194. (Coryphodon.)
 1884 O, p. 544, pls. xlv, xlvii; pl. xlvii, figs. 1-6; pl. xlviii, figs. 1-6. (Bathmodon.)
 1888 F, p. 85. (Bathmodon.)
 1889 C, p. 239, fig. 64.
Earle, C. 1892 A, pp. 151, 155, 159, fig. 2, B, C.
 1892 B.
King, C. 1878 A, p. 377.
Marsh, O. C. 1876 D, p. 425.
Matthew, W. D. 1899 A, p. 33.
Osborn, H. F. 1898 F, pl. x.
 1898 H, pp. 191, 197, 198, 213.
 1898 M, p. 585, fig. 1.
 1898 Q, p. 12.
Osborn and Wortman 1892 A, pp. 83, 119.
Roger, O. 1896 A, p. 155.
Trouessart, E. L. 1898 A, p. 712.
 Eocene (Wasatch); Wyoming, New Mexico.

Coryphodon repandus Cope.

Cope, E. D. 1882 C, pp. 170, 171.

1884 O, pp. 524, 532, pl. xliive, figs. 1-4.

Earle, C. 1892 A, pp. 151, 155, 156. (Syn. of C. radians.)

Matthew, W. D. 1899 A, p. 33. (Syn. of C. testis.)

Osborn, H. F. 1898 H, pp. 191, 197, 198, 201.

Trouessart, E. L. 1898 A, p. 712. (Syn. of C. radians.)

Eocene (Wasatch); Wyoming.

Coryphodon semicinctus Cope.

Cope, E. D. 1872 J, p. 420. (Bathmodon, Loxolophodon.)

1872 G, p. 352. (Bathmodon.)

1872 S, p. 488. (Loxolophodon.)

1873 E, pp. 567, 587, 588. (Bathmodon.)

1873 F, pp. 68, 70. (Bathmodon.)

1884 O, p. 544. (Syn.? of C. radians.)

Earle, C. 1892 A, p. 151. (Bathmodon.)

Marsh, O. C. 1872, S. (Loxolophodon.)

1873 B, p. 117. (Loxolophodon.)

1873 K, p. 147. (Loxolophodon.)

1876 D, p. 425.

Osborn, H. F. 1898 H, p. 191.

Trouessart, E. L. 1898 A, p. 712. (Syn.? of C. radians.)

Eocene (Wasatch); Wyoming.

Coryphodon singularis Osb.

Osborn, H. F. 1898 H, pp. 191, 197, 199, 214, fig. 215.

Matthew, W. D. 1899 A, p. 36.

Trouessart, E. L. 1899 A, p. 1346.

Eocene (Wind River); Wyoming.

Coryphodon subquadratus (Cope).

Cope, E. D. 1882 E, p. 166. (Manteodon.)

1882 M, p. 73. (Manteodon.)

1884 O, p. 518, pl. xliiva, figs. 1-5. (Manteodon.)

1884 EE, p. 1117, fig. 9f. (Manteodon quadratus.)

Earle, C. 1892 A, pp. 151, 165, fig. 2F. (Manteodon.)

Matthew, W. D. 1899 A, p. 33. (Syn. of C. hamatus.)

Osborn, H. F. 1898 H, pp. 191, 197, 214. (Syn.? of C. hamatus.)

Roger, O. 1896 A, p. 156.

Trouessart, E. L. 1898 A, p. 714. (Manteodon.)

Eocene (Wasatch); Wyoming.

Coryphodon testis (Cope).

Cope, E. D. 1882 E, p. 175. (Metalophodon.)

1882 M. (Metalophodon.)

1884 O, p. 557, pl. xliiva, fig. 13. (Metalophodon.)

1884 EE, p. 1197, fig. 16. (Metalophodon.)

1888 E, p. 84, fig. 3. (Metalophodon.)

1889 C, p. 238, fig. 63. (Metalophodon.)

Earle, C. 1892 A, pp. 151, 155, 156, 158, fig. 2, E. 1892 B.

Matthew, W. D. 1899 A, p. 33.

Osborn, H. F. 1898 H, p. 174, 175, 189, 190, 197, 202, figs. 4, 6, 14, 15, 16, 17A, 18C, 18a, 21-23, 29.

1900 F, p. 93, fig. 7.

Roger, O. 1896 A, p. 155.

Trouessart, E. L. 1898 A, p. 713.

Eocene (Wasatch); Wyoming.

Coryphodon ventanus Osb.

Osborn, H. F. 1898 H, pp. 191, 197, 210, figs. 16, 17, 26D.

Matthew, W. D. 1899 A, p. 36.

Trouessart, E. L. 1899 A, p. 1346.

Eocene (Wind River); Wyoming, Colorado.

Coryphodon wortmani Osb.

Osborn, H. F. 1898 H, pp. 191, 197, 199, 212, figs. 18B, 27.

Matthew, W. D. 1899 A, p. 36.

Trouessart, E. L. 1899 A, p. 1346.

Eocene (Wind River); Wyoming.

The following citations are given to descriptions of specifically undetermined remains of *Coryphodon*.

Cope, E. D. 1877 K, p. 237, pl. lvii, figs. 3-7 pl. lviii; p. 241, pl. lviii, fig. 9; pls. lxx, l, p. 247, pl. lxi; p. 248, pl. lxii; pl. lxiii, figs. 1-4.

Osborn, H. F. 1897 G, p. 256.

BATHYOPSIDÆ.

Osborn, H. F. 1898 H, p. 182.

BATHYOPSIS Cope. Type *B. fissidens* Cope.

Cope, E. D. 1881 D, p. 194.

1881 CC, p. 75.

1884 O, pp. 561, 596.

1885 F, pp. 44, 53.

1885 N.

Nicholson and Lydekker 1889 A, p. 1388.

Osborn, H. F. 1881 A, p. 17.

1898 H, pp. 173, 215, 217, fig. 3.

Scott, W. B. 1886 A, p. 304.

Trouessart, E. L. 1898 A, p. 717. (Syn. of Uintatherium.)

Zittel, K. A. 1893 B, p. 447.

Bathyopsis fissidens Cope.

Cope, E. D. 1881 D, p. 182.

Cope, E. D. 1881 CC, p. 75.

1882 E, p. 176.

1884 O, p. 597, pl. xxixa, figs. 1-3; pl. lviia, fig. 1.

1884 EE, pp. 1111, 1115, fig. 7.

1885 F, p. 53, fig. 35.

Marsh, O. C. 1884 F, p. 220, figs. 196, 197. (Uintatherium.)

Matthew, W. D. 1899 A, p. 36.

Roger, O. 1896 A, p. 158.

Trouessart, E. L. 1898 A, p. 718. (Uintatherium.)

Eocene (Wind River); Wyoming.

Suborder DINOCEREA Marsh.

Marsh, O. C. 1872 S.

Unless otherwise indicated, the following authorities refer to this suborder under the amended form of the name *Dinocerata*.

Baur, G. 1890 C.

Brandt, J. F. 1878 A, p. 16.

Cope, E. D. 1873 E, p. 564.

1873 F, pp. 40, 42.

1873 J, p. 11.

1873 X.

1875 C, p. 28.

1875 M.

1877 K, p. 182.

1882 A, p. 445.

1884 E.

1884 O, pp. 510, 512, 559, 587.

1884 EE, p. 1111.

1885 F, p. 40.

1885 N.

1885 O.

1886 F.

1888 T.

1898 B, p. 125.

Filhol, H. 1884 A.

Flower, W. H. 1876 B, xiii, p. 308.

Gadow, H. 1898 A, p. 45. (Amblypoda, part.)

Garrod, A. H. 1873 A.

1873 B.

Gaudry, A. 1885 A.

Haeckel E. 1895 A, p. 542.

Hay, O. P. 1899 F, p. 682.

Hill, F. C. 1881 A.

L. P. B. 1885 A.

Lydekker, R. 1886 A, p. 179.

Marsh, O. C. 1873 B.

1873 F.

1873 G.

1873 I.

1873 J.

1873 K.

1873 L.

1873 M.

1873 P.

1874 A, p. 84.

1874 D.

1876 A.

1876 G, p. 60.

1884 F.

1885 B.

Nicholson and Lydekker 1889 A, p. 1387.

Osborn, H. F. 1893 D.

1898 H, pp. 177, 180.

1900 F, p. 89.

Osborn, Scott, and Speir 1878 A, p. 62.

Owen, R. 1876 A, p. 401.

Rütimeyer, L. 1888 A, p. 13.

Schlosser, M. 1888 A, p. 587.

1890 C, p. 250.

Science 1885 A, p. 488.

Scott, W. B. 1892 A, p. 439.

Steinmann and Döderlein 1890 A, p. 764.

Tomes, C. S. 1898 A, p. 440.

Zittel, K. A. 1893 B, p. 439. (Amblypoda, part.)

TINOCERIDÆ.

Marsh, O. C. 1872 M, p. 323.

Cope, E. D. 1873 E, pp. 563, 564. (Eobasilidæ.)

1873 F, p. 41. (Eobasilidæ.)

1875 K. (Eobasilidæ.)

1873 X, p. 292. (Eobasilidæ.)

1888 F, pp. 80, 86. (Uintatheriidæ.)

1889 R, p. 877. (Uintatheriidæ.)

Flower, W. H. 1876 B, xiii, p. 387. (Uintatheriidæ.)

1876 C, p. 114. (Uintatheriidæ.)

Haeckel E. 1895 A, p. 530. (Dinoceratidæ.)

Lydekker, R. 1886 A, p. 179. (Uintatheriidæ.)

1896 B. (Uintatheriidæ.)

Marsh, O. C. 1873 F, p. 295. (Tinoceratidæ.)

1884 F, p. 191. (Tinoceratidæ.)

Nicholson and Lydekker 1889 A, p. 1387. (Uintatheriidæ.)

Osborn, H. F. 1898 H, p. 182. (Uintatheriidæ.)

Roger, O. 1896 A, p. 156. (Dinoceratidæ.)

Trouessart, E. L. 1898 A, p. 715. (Uintatheriidæ.)

Zittel, K. A. 1893 B, p. 439. (Dinoceratidæ.)

UINTATHERIUM Leidy. Type *U. robustum* Leidy.

Leidy, J. 1872 G, p. 169.

Cope, E. D. 1873 E, pp. 564, 580.

1873 F, p. 60.

1873 K.

1874 M.

1877 K, p. 186.

1882 H, p. 294.

1883 U.

1884 O, pp. 561, 587.

1884 EE, p. 1117.

1885 F, pp. 44, 53.

1885 N, p. 594 (Uintatherium; Ditetradon, type *Uintatherium segne*.)

1888 F, p. 88, figure.

1889 C.

Flower, W. H. 1876 B, xiii, p. 387.

1876 C, p. 118.

Flower and Lydekker 1891 A, p. 436.

Leidy, J. 1872 A, p. 240. (Uintatherium, Uintamastix.)

1872 G, p. 169. (Uintamastix, type *U. atrox*.)

1872 H, p. 241.

1873 B, pp. 93, 331.

L. P. B. 1885 A.

Marsh, O. C. 1873 F.

1874 D.

1881 G.

1884 F, p. 191.

Nicholson and Lydekker 1889 A, p. 1388.

Osborn, H. F. 1881 A.

1890 D, p. 538.

1895 A, p. 82.

1897 G, pp. 252, 258.

1898 F, p. 91.

1898 H, p. 174.

1898 M, p. 587.

Osborn, Scott, and Speir 1878 A, p. 62.
 Science 1885 A, p. 490.
 Scott, W. B. 1891 B, pp. 375, 385.
 Trouessart, E. L. 1898 A, p. 717.
 Woodward, A. S. 1898 B, p. 299.
 Zittel, K. A. 1893 B, p. 446.

Uintatherium alticeps Scott.

Scott, W. B. 1886 A, p. 307, fig. 4.
 Matthew, W. D. 1899 A, p. 44.
 Roger, O. 1896 A, p. 157. (Tinoceras.)
 Eocene (Bridger); Wyoming.

Uintatherium latifrons Marsh.

Marsh, O. C. 1884 F, p. 220, figs. 11, 125-128.
 1885 B, pp. 249, 262, fig. 48.
 Matthew, W. D. 1899 A, p. 44.
 Roger, O. 1896 A, p. 157.
 Trouessart, E. L. 1898 A, p. 718.
 Eocene (Bridger); Wyoming.

Uintatherium leidianum Osb., Scott, and Speir.

Osborn, Scott, and Speir 1878 A, p. 63, pls. vi-viii.
 Cope, E. D. 1884 O, pp. 593, 599, fig. 26.
 1884 EE, p. 1117, fig. 10.
 1885 F, p. 53, fig. 27.
 Hill, F. C. 1881 A, p. 524.
 Marsh, O. C. 1884 F, p. 221, fig. 198.
 Matthew, W. D. 1899 A, p. 44.
 Osborn, H. F. 1881 A, pp. 18, 19, 23, pl. ii.
 Roger, O. 1896 A, p. 158.
 Trouessart, E. L. 1898 A, p. 718.
 Eocene (Bridger); Wyoming.

Uintatherium princeps Osb., Scott, and Speir.

Osborn, Scott, and Speir 1878 A, p. 81, pl. vii, fig. 2.
 Cope, E. D. 1884 O, p. 593.
 Marsh, O. C. 1884 F, p. 223.
 Matthew, W. D. 1899 A, p. 44.
 Eocene (Bridger); Wyoming.

DINOCERAS Marsh. Type *D. mirabilis* Marsh.

Marsh, O. C. 1872 R, p. 343.
 Barbour, E. H. 1890 B, p. 395.
 Cope, E. D. 1873 E, p. 580. (Syn. of *Uintatherium*.)
 1877 S. (Syn. of *Uintatherium*.)
 1884 O, p. 587. (Syn. of *Uintatherium*.)
 1885 F, pp. 44, 53. (Octotomus, type *D. laticeps*.)
 1885 O.
 Flower, W. H. 1876 B, xiii, p. 387.
 Flower and Lydekker 1891 A, p. 437. (Syn. of *Uintatherium*.)
 Garrod, A. H. 1873 A, p. 74.
 Gaudry, A. 1878 B, p. 74.
 1889 A.
 L. P. B. 1885 A.
 Leidy, J. 1873 B, pp. 95, 332. (Syn. of *Uintatherium*.)
 Lydekker, R. 1886 A, p. 182.
 Marsh, O. C. 1873 F.
 1873 G.

Uintatherium robustum Leidy.

Leidy, J. 1872 G, p. 169.
 Cope, E. D. 1873 E, pp. 581, 583.
 1873 F, p. 64.
 1873 K, p. 102.
 1873 X, p. 291.
 1882 H, p. 295.
 1884 O, p. 589, pl. xxxvi, figs. 1, 2.
 1885 F, p. 53.
 King, C. 1878 A, p. 403.
 Leidy, J. 1872 A, p. 240. (*U. robustum*, *Uintamastix atrox*.)
 1872 G, p. 169. (*Uintamastix atrox*, original description.)
 1872 H, p. 241. (*U. robustum*, *Uintamastix atrox*.)
 1873 B, pp. 96, 333, pl. xxv, figs. 6-12; pl. xxvi, figs. 1-3; pl. xxvii, figs. 30-34.
 Marsh, O. C. 1872 S.
 1873 B, p. 117.
 1873 K, p. 147.
 1873 L, p. 218.
 1884 F, p. 219, figs. 61, 62, 195.
 1885 B, fig. 98, 99.
 Matthew, W. D. 1899 A, p. 43.
 Osborn, Scott, and Speir 1878 A, p. 82.
 Roger, O. 1896 A, p. 157.
 Trouessart, E. L. 1898 A, p. 717.
 Eocene (Bridger); Wyoming.

Uintatherium segne Marsh.

Marsh, O. C. 1884 F, p. 222, figs. 4, 42, 101, 102, 199, 200.
 Cope, E. D. 1885 N, p. 594. (*Ditetrodon*.)
 L. P. B. 1885 A, p. 186, fig. 16.
 Marsh, O. C. 1885 B, figs. 78, 79.
 Matthew, W. D. 1899 A, p. 44.
 Roger, O. 1896 A, p. 158.
 Trouessart, E. L. 1898 A, p. 718.
 Eocene (Bridger); Wyoming.

Uintatherium sp. indet. Cope.

Cope, E. D. 1884 O, p. 593, pls. xxxiv, xxxv.
 Eocene (Bridger); Wyoming.

Marsh, O. C. 1874 D.
 1876 A, p. 162.
 1877 H.
 1881 G.
 1884 F, p. 200. (*Paroceras*, type *D. laticeps*.)
 Nicholson and Lydekker 1889 A, p. 1388.
 Osborn, H. F. 1898 M, p. 587.
 Osborn, Scott, and Speir 1878 A, p. 62.
 Owen, R. 1876 A, p. 401.
 Trouessart, E. L. 1898 A, p. 715.
 Wiedersheim, R. 1881 A, p. 363.
 Woodward, A. S. 1898 B, p. 296.
 Zittel, K. A. 1893 B, p. 446.

Dinoceras agreste Marsh.

Marsh, O. C. 1884 F, pp. 19, 197, fig. 15.
 Matthew, W. D. 1899 A, p. 43.
 Roger, O. 1896 A, p. 156.
 Trouessart, E. L. 1898 A, p. 715.
 Eocene (Bridger); Wyoming.

Dinoceras cuneum Marsh.

- Marsh, O. C. 1884 F, pp. 77, 197, figs. 93, 94, 170, 171.
 1885 B, figs. 118, 119.
 Matthew, W. D. 1899 A, p. 43.
 Roger, O. 1896 A, p. 156.
 Trouessart, E. L. 1898 A, p. 715.
 Eocene (Bridger); Wyoming.

Dinoceras distans Marsh.

- Marsh, O. C. 1884 F, pp. 13, 15, 16, 29, 199, figs. 4, 8, 10, 31.
 L. P. B. 1885 A, p. 181, fig. 8.
 Marsh, O. C. 1885 B, figs. 41, 45, 47, 66.
 Matthew, W. D. 1899 A, p. 43.
 Roger, O. 1896 A, p. 156.
 Eocene (Bridger); Wyoming.

Dinoceras laticeps Marsh.

- Marsh, O. C. 1873 I, p. 301.
 Cope, E. D. 1885 F, p. 53, fig. 34. (Octotomus.)
 King, C. 1878 A, p. 403.
 L. P. B. 1885 A, figs. 18, 23.
 Marsh, O. C. 1876 A, p. 168, pl. v.
 1884 F, p. 200, text figs. 14, 22, 27, 33, 47, 50, 57, 58, 112, 136, 138-140; pls. x-xiv, xliii.
 [Dinoceras (Paroceras).]
 1885 B, figs. 51, 57, 62, 68, 71, 72, 84, 85, 87, 94, 95.
 Matthew, W. D. 1899 A, p. 43.
 Osborn and Speir 1879 A, p. 304. (Uintatherium.)
 Roger, O. 1896 A, p. 156.
 Trouessart, E. L. 1898 A, p. 715.
 Eocene (Wyoming); Wyoming.

Dinoceras lucare Marsh.

- Marsh, O. C. 1873 H, p. 408.
 King, C. 1878 A, p. 403.
 L. P. B. 1885 A, p. 176.
 Leidy, J. 1873 B, p. 334.
 Marsh, O. C. 1884 F, p. 200, pl. ix; text figs. 46, 103-110, 172, 173.
 1885 B, figs. 83, 124, 125.
 Matthew, W. D. 1899 A, p. 43.
 Roger, O. 1896 A, p. 156.
 Scott, W. B. 1886 A, p. 307.
 Trouessart, E. L. 1898 A, p. 715.
 Eocene (Wyoming); Wyoming.

Dinoceras mirabile Marsh.

- Marsh, O. C. 1872 R.
 Cope, E. D. 1873 D, p. 1. (Uintatherium.)
 1873 E, pp. 581, 584. (Uintatherium.)
 1873 F, p. 65. (Uintatherium.)
 1873 X, p. 292. (Uintatherium.)
 1874 B, p. 456. (Uintatherium.)
 1884 O, p. 589. (Uintatherium.)
 1885 F, p. 53, figs. 25, 26, 33. (Uintatherium.)
 1889 C, p. 158, figure. (Uintatherium.)
 Emerton, J. H. 1887 A.
 King, C. 1878 A, p. 403.
 L. P. B. 1885 A, with figures.
 Leidy, J. 1872 H, p. 241. (Syn.? of Uintatherium robustum.)
 1873 B, pp. 97, 108, 333. (Syn.? of U. robustum.)
 Lydekker, R. 1886 A, p. 182.
 Marsh, O. C. 1872 S.
 1873 B, p. 118, pls. i, ii.
 1873 K, pls. i, ii.
 1873 L, p. 218.
 1876 A, p. 165, pls. ii-iv.
 1881 G, pl. ii.
 1884 F, pls. i-vii, xx-xlii, xliiv-lv; text figs. 3, 7, 13, 26, 34, 35, 39, 40, 43-45, 63, 89, 90, 91, 92, 95, 96, 99, 100, 106-109, 111, 113, 114, 118-123, 129-132, 143-146, 152, 153.
 1885 B, figs. 38-40, 44, 50, 69, 70, 76, 80-82, 100, 116, 117, 120-123, 134-136.
 Matthew, W. D. 1899 A, p. 43. (Uintatherium.)
 Nature 1873 A.
 1873 B.
 Osborn, H. F. 1881 A, p. 24. (Uintatherium.)
 1900 F, p. 93. (Uintatherium.)
 Roger, O. 1896 A, p. 156.
 Trouessart, E. L. 1898 A, p. 715.
 Woodward, A. S. 1898 B, p. 296, fig. 169.
 Zittel, K. A. 1893 B, p. 440, figs. 361, 362, 364-367.
 Eocene (Bridger); Wyoming.

Dinoceras reflexum Marsh.

- Marsh, O. C. 1884 F, p. 201, fig. 174.
 Matthew, W. D. 1899 A, p. 43.
 Roger, O. 1896 A, p. 156.
 Trouessart, E. L. 1898 A, p. 715.
 Eocene (Bridger); Wyoming.

TINOCERAS Marsh. Type *Titanotherium? anceps* Marsh.

- Marsh, O. C. 1872 L, p. 322. (Issued in advance, Aug. 19.)
 Barbour, E. H. 1890 B, p. 395.
 Cope, E. D. 1872 S, p. 487. (Loxolophodon¹, in part.)
 1872 T, p. 542. (Loxolophodon.)
 1872 W. (Lefalophodon, error for Loxolophodon; issued Aug. 19.)
 1872 II. (Loxolophodon.)
 1873 E, pp. 564, 565. (Loxolophodon.)
 1873 F, pp. 40-43. (Loxolophodon.)
 1873 K. (Loxolophodon.)
 1873 X, p. 293. (Loxolophodon.)

- Cope, E. D. 1877 K, p. 148. (Loxolophodon.)
 1879 Q. (Loxolophodon.)
 1884 O, pp. 561, 569. (Loxolophodon.)
 1885 F, p. 44. (Loxolophodon.)
 1885 N. (Loxolophodon; Tetheopsis, type *Tinoceras stenops*.)
 1886 F. (Tetheopsis.)
 Filhol, H. 1884 A, pl. ix. (Loxolophodon.)
 Flower and Lydekker 1891 A, p. 437. (Syn. of Uintatherium.)
 Hill, F. C. 1881 A. (Loxolophodon.)
 L. P. B. 1885 A.
 Leidy, J. 1873 B, p. 332. (Syn. of Uintatherium.)

¹ The generic title *Loxolophodon* was first employed by Professor Cope for *Bathmodon semicinctus*, now regarded as a species of *Coryphodon*. Later Professor Cope used the name for the genus here called *Tinoceras*. In this sense the type was *L. cornutus* (Cope, 1884 O, p. 572).

- Lydekker, R. 1886 A, p. 180.
 1893 E, p. 142. (Tinoceras, "miscalled.")
 Marsh, O. C. 1872 G, p. 504.
 1873 F, p. 295.
 1873 G.
 1873 J.
 1873 L, p. 216.
 1873 M.
 1873 P, p. ii. ("Lefalophodon.")
 1874 D.
 1877 A, p. 81.
 1881 G.
 1884 F, p. 191.
 1885 B.
 Nicholson and Lydekker 1889 A, p. 1388.
 Osborn, H. F. 1881 A, pls. iii, iv. (Loxolophodon.)
 Osborn, Scott, and Speir 1878 A, p. 62.
 Osborn and Speir 1879 A, p. 304, pl. ii. (Loxolophodon.)
 Science 1885 A, p. 490.
 Steinmann and Döderlein 1890 A, p. 765.
 Trouessart, E. L. 1898 A, p. 716. (Loxolophodon.)
 Woodward, A. S. 1898 B, p. 299.
 Zittel, K. A. 1893 B, p. 446.

Tinoceras affine Marsh.

- Marsh, O. C. 1884 F, p. 204, figs. 16, 178, 179.
 Matthew, W. D. 1899 A, p. 43.
 Roger, O. 1896 A, p. 157.
 Trouessart, E. L. 1898 A, p. 716. (Loxolophodon.)
 Eocene (Bridger); Wyoming.

Tinoceras anceps Marsh.

- Marsh, O. C. 1871 D, p. 35. (Titanotherium?).
 Cope, E. D. 1873 F, p. 41. (Titanotherium.)
 1873 J. (Titanotherium.)
 1884 O, p. 572.
 King, C. 1878 A, p. 403.
 Leidy, J. 1872 B, p. 365. (Titanotherium.)
 1873 B, p. 334. (Uintatherium.)
 Marsh, O. C. 1872 G, p. 123 (Mastodon anceps);
 p. 504 (Tinoceras).
 1872 L.
 1873 B, p. 117.
 1873 H, p. 408.
 1873 K, p. 147.
 1873 L, p. 218.
 1873 N, p. 51.
 1884 F, figs. 97, 98, 175-177.
 Matthew, W. D. 1899 A, p. 43.
 Roger, O. 1896 A, p. 157.
 Trouessart, E. L. 1898 A, p. 716. (Loxolophodon.)
 Eocene (Bridger); Wyoming.

Tinoceras annectens Marsh.

- Marsh, O. C. 1884 F, p. 205, figs. 6, 21, 36, 37.
 L. P. B. 1885 A, fig. 4.
 Marsh, O. C. 1885 B, figs. 43, 56, 73, 74.
 Matthew, W. D. 1899 A, p. 43.
 Roger, O. 1896 A, p. 157.
 Trouessart, E. L. 1898 A, p. 716. (Loxolophodon.)
 Eocene (Bridger); Wyoming.

Tinoceras cornutum (Cope).

- Cope, E. D. 1872 W. (Lefalophodon dicornutus,
 error for Loxolophodon cornutus.)
 Barbour, E. H. 1890 B, p. 395, fig. 8.

- Cope, E. D. 1872 S, p. 488. (Loxolophodon.)
 1872 II. (Loxolophodon.)
 1872 KK. (Eobasileus.)
 1873 E, pp. 568, 575, pls. i-iv. (Loxolophodon.)
 1873 F, pp. 45, 54. (Loxolophodon.)
 1873 W, p. 151. (Eobasileus.)
 1873 X, p. 298, pls. i, ii. (Loxolophodon.)
 1873 Y, p. 49. (Eobasileus.)
 1873 BB. (Loxolophodon.)
 1884 O, pp. 573, 574, pls. xxxvii-xliii. (Loxolophodon.)
 1885 F, p. 45, pl. i, text figs. 24, 29, 31, 32.
 (Loxolophodon.)
 1885 O. (Loxolophodon.)
 1887 S, p. 277, pl. viii. (Uintatherium.)
 Leidy, J. 1873 B, p. 333. (Loxolophodon.)
 Lydekker, R. 1886 A, p. 180.
 Marsh, O. C. 1873 F, p. 294 (T. grande); p. 296 (T. cornutum).
 1873 G.
 1873 J. (T. grande.)
 1873 L, p. 216 (T. cornutum); p. 217 (T. grande).
 1873 M, p. 306. (T. cornutum, T. grande.)
 1873 P, p. ii.
 1884 F, p. 206, figs. 180, 181.
 Matthew, W. D. 1899 A, p. 44. (Uintatherium.)
 Nature 1873 C. (Loxolophodon.)
 Osborn, H. F. 1896 C, p. 706, illus. 2. (Uintatherium.)
 1898 Q, p. 17. (Uintatherium.)
 1900 F, p. 90, fig. 2. (Uintatherium.)
 Osborn and Speir 1879 A, p. 304, pl. i. (Loxolophodon.)
 Roger, O. 1896 A, p. 157.
 Trouessart, E. L. 1898 A, p. 716. (Loxolophodon.)
 Zittel, K. A. 1893 B, p. 447, fig. 368.
 Eocene (Bridger); Wyoming.

Tinoceras crassifrons Marsh.

- Marsh, O. C. 1884 F, p. 208, figs. 29, 182.
 L. P. B. 1885 A, fig. 12.
 Marsh, O. C. 1885 B, fig. 25.
 Matthew, W. D. 1899 A, p. 43.
 Roger, O. 1896 A, p. 157.
 Trouessart, E. L. 1898 A, p. 716. (Loxolophodon.)
 Eocene (Bridger); Wyoming.

Tinoceras galeatum Cope.

- Cope, E. D. 1873 D, p. 1. (Eobasileus.)
 1874 B, p. 456, pl. i. (Eobasileus, Loxolophodon.)
 1874 T. (Eobasileus.)
 1884 O, pp. 573, 585, pls. xliii, xliv. (Loxolophodon.)
 1885 F, p. 46.
 Marsh, O. C. 1884, F, p. 209, figs. 183, 184.
 Matthew, W. D. 1899 A, p. 44. (Uintatherium.)
 Osborn, H. F. 1881 A, pp. 21, 22. (Loxolophodon.)
 Roger, O. 1896 A, p. 157.
 Trouessart, E. L. 1898 A, p. 716. (Loxolophodon.)
 Eocene (Bridger); Wyoming.

Tinoceras grande Marsh.

- Marsh, O. C. 1872 M, p. 323.
 Cope, E. D. 1873 E, p. 575. (Loxolophodon cornutus.)
 1873 F, pp. 54, 61.

- L. P. B. 1885 A, figs. 31, 32.
 Marsh, O. C. 1873 F, p. 294.
 1873 G.
 1873 L, pp. 217, 218.
 1884 F, p. 210, figs. 20, 49, 87, 88, 185.
 1885 B, figs. 55, 86, 113-115.
 Matthew, W. D. 1899 A, p. 44.
 Roger, O. 1896 A, p. 157.
 Trouessart, E. L. 1898 A, p. 716. (Loxolophodon.)
 Eocene (Bridger); Wyoming.

Tinoceras hians Marsh.

- Marsh, O. C.* 1884 F, p. 210, figs. 32, 186.
 1885 B, fig. 67.
 Matthew, W. D. 1899 A, p. 44. (Uintatherium.)
 Roger, O. 1896 A, p. 157.
 Trouessart, E. L. 1898 A, p. 717. (Loxolophodon.)
 Eocene (Bridger); Wyoming.

Tinoceras ingens Marsh.

- Marsh, O. C.* 1884 F, p. 211, figs. 9, 17, 23, 25, 28, 51, 115-117, 124, 141, 142.
 Barbour, E. H. 1890 B, p. 394, fig. 7.
 Hutchison, H. N. 1893 A, p. 150, pl. xiv.
 L. P. B. 1885 A, figs. 6, 10, 22.
 Lydekker, R. 1886 A, p. 181, fig. 30.
 Marsh, O. C. 1885 B, figs. 46, 52, 58, 63, 88, 96, 97, 126, 127, 137.
 Matthew, W. D. 1899 A, p. 44. (Uintatherium.)
 Osborn, H. F. 1900 F, p. 94. (Uintatherium.)
 Roger, O. 1896 A, p. 157.
 Trouessart, E. L. 1898 A, p. 717. (Loxolophodon.)
 Eocene (Bridger); Wyoming.

Tinoceras jugum Marsh.

- Marsh, O. C.* 1884 F, p. 212, fig. 187.
 Matthew, W. D. 1899 A, p. 44. (Uintatherium.)
 Roger, O. 1896 A, p. 157.
 Trouessart, E. L. 1898 A, p. 717. (Loxolophodon.)
 Eocene (Bridger); Wyoming.

Tinoceras lacustre Marsh.

- Marsh, O. C.* 1872 R, p. 344. (Dinoceras.)
 Cope, E. D. 1873 E, pp. 581, 584. (Uintatherium.)
 1873 F, pp. 61, 66. (Uintatherium.)
 1884 O, pp. 589, 591, pl. xxxvi, figs. 3-8. (Uintatherium.)
 1886 F. (Uintatherium.)
 King, C. 1878 A, p. 403. (Dinoceras.)
 Marsh, O. C. 1873 L, p. 218. (Dinoceras.)
 1884 F, p. 212, fig. 188.
 Matthew, W. D. 1899 A, p. 44. (Uintatherium.)
 Roger, O. 1896 A, p. 157.
 Trouessart, E. L. 1898 A, p. 717. (Loxolophodon.)
 Eocene (Bridger); Wyoming.

Tinoceras latum Marsh.

- Marsh, O. C.* 1884 F, p. 213, figs. 189, 190.
 Matthew, W. D. 1899 A, p. 44. (Uintatherium.)
 Roger, O. 1896 A, p. 157.
 Trouessart, E. L. 1898 A, p. 717. (Loxolophodon.)
 Eocene (Bridger); Wyoming.

Tinoceras longiceps Marsh.

- Marsh, O. C.* 1884 F, p. 214, figs. 38, 48, 191, 192.
 1885 B, pp. 275, 279, figs. 75, 85.
 Matthew, W. D. 1899 A, p. 44. (Uintatherium.)
 Roger, O. 1896 A, p. 157.
 Trouessart, E. L. 1898 A, p. 717. (Loxolophodon.)
 Eocene (Bridger); Wyoming.

Tinoceras pugnax Marsh.

- Marsh, O. C.* 1884 F, p. 215, figs. 5, 18, 19, 24, 25, 29, 67.
 L. P. B. 1885 A, fig. 9.
 Marsh, O. C. 1885 B, figs. 42, 53, 54, 59, 64, 89, 104.
 Matthew, W. D. 1899 A, p. 44. (Uintatherium.)
 Roger, O. 1896 A, p. 157.
 Trouessart, E. L. 1898 A, p. 717. (Loxolophodon.)
 Eocene (Bridger); Wyoming.

Tinoceras speirianum Osb.

- Osborn, H. F.* 1881 A, p. 20, pl. i. (Loxolophodon.)
 Cope, E. D. 1884 O, pp. 573, 599, fig. 28. (Loxolophodon.)
 1885 F, p. 46, fig. 28.
 Marsh, O. C. 1884 F, p. 216, fig. 193.
 Matthew, W. D. 1899 A, p. 44. (Uintatherium.)
 Roger, O. 1896 A, p. 157.
 Trouessart, E. L. 1898 A, p. 717. (Loxolophodon.)
 Eocene (Bridger); Wyoming.

Tinoceras stenops Marsh.

- Marsh, O. C.* 1884 F, p. 217, figs. 53, 54, 194.
 Cope, E. D. 1885 N, p. 594. (Tetheopsis.)
 1886 F, p. 155.
 L. P. B. 1885 A, figs. 20, 21.
 Lydekker, R. 1886 A, p. 179, fig. 28.
 Marsh, O. C. 1885 B, figs. 90, 91.
 Matthew, W. D. 1899 A, p. 44. (Uintatherium.)
 Roger, O. 1896 A, p. 157.
 Trouessart, E. L. 1898 A, p. 717. (Loxolophodon.)
 Eocene (Bridger); Wyoming.

Tinoceras vagans Marsh.

- Marsh, O. C.* 1884 F, p. 218, fig. 12.
 1885 B, fig. 49.
 Matthew, W. D. 1899 A, p. 44. (Uintatherium.)
 Roger, O. 1896 A, p. 157.
 Trouessart, E. L. 1898 A, p. 717. (Loxolophodon.)
 Eocene (Bridger); Wyoming.

ELACHOCERAS Scott. Type *E. parvum* Scott.

- Scott, W. B.* 1886 A, p. 304.
 Nicholson and Lydekker 1889 A, pp. 1384, 1388.
 Zittel, K. A. 1893 B, p. 447.

Elachoceras parvum Scott.

- Scott, W. B.* 1886 A, p. 305, figs. 2, 3.

- Matthew, W. D. 1899 A, p. 44. (Uintatherium.)
 Roger, O. 1896 A, p. 156.
 Trouessart, E. L. 1898 A, p. 715.
 Eocene (Bridger); Wyoming.

EOBASILEUS Cope. Type "*E. cornutus*" = *E. pressicornis*.

- Cope, E. D.* 1872 R, p. 485. (Aug. 20, 1872 as Paleont. Bull. No. 6.)
 1872 S, p. 488. (*Loxolophodon*, in part.)
 1872 W. (*Lefalophodon*, in part.)
 1872 II. (*Loxolophodon*, in part.)
 1873 E, pp. 564, 567, 575, 645.
 1873 F, p. 54.
 1873 J.
 1873 K.
 1873 W.
 1873 Z.
 1884 O, p. 561.
 1885 F, pp. 44, 45.
Leidy, J. 1873 B, p. 332. (Syn. of *Uintatherium*.)
Marsh, O. C. 1873 B, pp. 118, 122.
 1873 F.
 1873 K, p. 151.
Nicholson and Lydekker 1889 A, p. 1388.
Science 1885 A, p. 490.
Trouessart, E. L. 1898 A, p. 718.
Zittel, K. A. 1893 B, pp. 446, 447.
 A genus of doubtful validity; probably equivalent to *Tinoceras*.
- Eobasileus furcatus* Cope.**
Cope, E. D. 1872 W. (*Lefalophodon bifurcatus*, error for *Loxolophodon furcatus*.)
 1872 S, p. 488. (*Loxolophodon*.)
 1872 II. (*Loxolophodon*.)
 1872 KK, p. 774.
 1873 E, p. 580.
 1873 F, p. 59.
 1873 W, p. 159. (*Uintatherium*.)
- Cope, E. D.* 1873 X, p. 291.
 1884 O, p. 565 (*Eobasileus*); pls. xxxii xxxiii (*Uintatherium*).
 1885 F, p. 45.
Marsh, O. C. 1873 B, p. 118.
 1873 F, p. 295.
 1873 K, p. 151.
 1873 L, p. 217.
 1884 F, p. 223. (*Tinoceras*.)
Matthew, W. D. 1899 A, p. 44. (*Uintatherium*.)
Trouessart, E. L. 1898 A, p. 718.
 Eocene (Bridger); Wyoming.
- Eobasileus pressicornis* Cope.**
Cope, E. D. 1872 W. (*Lefalophodon exressicornis*, error for *Loxolophodon pressicornis*.)
 1872 R, p. 485. (*E. cornutus*, not *Loxolophodon cornutus* of Cope, E. D. 1872 W.)
 1872 S, p. 488. (*Loxolophodon*.)
 1872 II, p. 580. (*Loxolophodon*.)
 1872 KK, p. 774.
 1873 E, p. 575.
 1873 F, p. 54.
 1873 W, p. 159. (*Uintatherium*.)
 1884 O, p. 562, pl. xxx, figs. 1-5; pl. xxxi.
Marsh, O. C. 1873 F, p. 295.
 1873 L, p. 217.
 1884 F, p. 223. (*Tinoceras*.)
Matthew, W. D. 1899 A, p. 44. (*Uintatherium*.)
Roger, O. 1896 A, p. 158.
Trouessart, E. L. 1898 A, p. 718.
 Eocene (Bridger); Wyoming.

Order PROBOSCIDEA.

- Baur, G.* 1889 K.
Cope, E. D. 1873 E, pp. 561-563.
 1873 F, p. 38.
 73 J, p. 11.
 1874 M.
 1880 B, p. 457.
 1882 A, p. 444.
 1882 Y.
 1883 D.
 1884 O, pp. 167, 378, 379.
 1887 S, p. 342.
 1888 D, p. 257.
 1889 C, 142 *et seq.*
 1889 J.
 1889 R, pp. 875, 877.
Cope and Wortman 1884 A, p. 13.
Flower, W. H. 1876 B, xiii, p. 350.
 1883 D, p. 423.
 1885 A.
Flower and Lydekker 1891 A, p. 418.
Gadow, H. 1898 A, p. 45.
Gandry, A. 1878 B, p. 169.
Gill, T. 1872 A, p. 301.
 1872 B, pp. 13, 48, 89.
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- Adams, A. L. 1877 B.
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 1842 B, p. 142 (Tetracaulodon); p. 143 (Hipopotamus).
 1843 A, p. 210. (Tetracaulodon.)
 Hays, I. 1834 A.
 1842 A. (Tetracaulodon.)
 Hays, I. 1842 B, p. 275. (Missourium, Tetracaulodon, Mastodon.)
 1843 A.
 1844 A. (Tetracaulodon.)
 Horner, W. E. 1841 A.
 1841 B. (Mastodon, Tetracaulodon.)
 1841 C. (Tetracaulodon.)
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 Meyer, H. 1867 B.
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 Naumann, E. 1879 A.
 Nicholson and Lydekker 1889 A, p. 1395.
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1846 A, p. 268. (*Mastodon*.)

1846 B, p. 131, fig. 1. (*M. giganteus*.)

1852 A. (*M. giganteus*.)

1853 A. (*M. giganteus*.)

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1868 A, p. 381. ("Mastodon.")

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Carpenter, W. M. 1838 A, p. 202. ("Mastodon.")

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1846 A, pp. 244, 249 ("Mastodon"); p. 250 ("Dinotherium").

Chaloner, A. D. 1843 A. ("Mastodon.")

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Cheney, T. A. 1872 A. (*M. giganteus*.)

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1869 N, p. 740. (*Trilophodon ohiocticus*.)

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1874 J, p. 221. (*M. ohiocticus*.)

1875 F, p. 66. (*M. ohiocticus*.)

1875 V, p. 51. (*Trilophodon ohiocticus*.)

?1877 C, p. 584. (*Cænobasileus tremonti-gerus*.)

1882 O. (*M. giganteus*.)

1884 G, pp. 5, 8.

1884 V, p. 525. (*M. ohiocticus*.)

1885 S.

1887 S, p. 56. (*Trilophodon ohiocticus*.)

Cope, E. D. 1889 F, p. 164. (*Mastodon*.)

1889 J, p. 206, text fig. 3, pl. xv, fig. 2.

1899 A, p. 252. (*Mastodon*.)

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Couper, J. H. 1842 A, p. 216. ("Hippopotamus," "*Mastodon*.")

1846 in Hodson, W. B. 1846 A, p. 31. (*M. giganteus*.)

Croom, H. B. 1835 A, p. 170. (*M. giganteus*.)

Cuvier, G. 1799 A, p. 19. (*Animal de l'Ohio*.)

1806 A, p. 55. ("Mastodonte.")

1806 B, pp. 270, 312, pls. xlix-lvi. ("Mastodonte.")

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1842 C, p. 102. (*M. giganteus*.)

Depéret, C. 1887 A, p. 175. (*M. ohiocticus*.)

Desor, E. 1849 A, p. 207. ("Mastodon.")

1852 A, p. 58. ("Mastodon.")

Dickeson, M. W. 1846 A, p. 106. (*M. giganteus*.)

Domeier, W. 1803 A. ("Mammoth.")

Falconer, H. 1857 B. [*M. (Trilophodon) ohiocticus*].

1868 A, i, p. 49, pl. vii, fig. 2. (*M. ohiocticus*.)

Falconer and Cautley 1846 A, p. 16, pl. iii, fig. 9, pl. xl, fig. 16; pl. xlv, fig. 4. (*M. ohiocticus*.)

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Foster, J. W. 1838 A, p. 79. (*M. maximus*.)

1839 A, fig. 1. (*M. giganteum*.)

1849 A. (*M. giganteum*.)

1857 A. (*M. giganteum*.)

Gaudry, A. 1891 B, p. 4, pl. ii, fig. 7.

Gazley, S. 1830 A. ("Mastodon.")

Giebel, C. G. 1847 A, p. 197 (*Tapirus mastodontoides*); p. 202 (*M. giganteum*).

Gilbert, G. K. 1871 A, p. 220. ("Mastodon.")

Goddard, — 1841 A. ("Mastodon.")

Godman, J. D. 1825 A, pl. ii. (*M. giganteus*.)

1828 A, p. 205, pls. opp. pp. 205, 225, 231, 236. (*M. giganteum*.)

1830 A, pls. xvii, xviii. (*Tetracaulodon mastodontoideum*.)

Gray, A. 1846 A. ("Mastodon.")

Hall, J. 1843 A, p. 363, plate, fig. No. 74; text fig. 173. (*M. maximus*.)

1871 A, pls. iii-vii. (*M. giganteus*.)

Hallowell, E. 1847 A. ("Mastodon.")

Harlan, R. 1825 A, p. 211 (*M. giganteus*); p. 2 (*Tapirus mastodontoides*, *M. tapiroides*).

1834 B, p. 47 (*M. giganteum*, *M. maximus*); pp. 57, 59 (*Tapirus mastodontoides*, *M. tapiroides*).

1835 B, p. 254 (*M. giganteum*), p. 262 (*M. tapiroides*), p. 265 (*Tapirus mastodontoides*).

1842 E. (*M. giganteus*.)

1843 A, p. 210. ("Mastodon.")

Hartt, C. F. 1871 A. ("Mastodon.")

Hayden, F. V. 1866 A. ("Mastodon.")

- Hayes, S. 1895 A. ("Mastodon.")
- Hays, I. 1834 A. (*M. giganteum*); p. 334, pl. xxiv (*M. cuvieri*); p. 334, pl. xxv (*M. jeffersonii*); p. 334, pl. xxviii (*M. collinsii*); p. 334, pl. xxix (*Tetracaulodon godmani*).
 1841 A, pp. 102, 106. ("Tetracaulodon," *M. giganteum*.)
 1842 A, p. 183. (*Tetracaulodon*, *M. giganteum*.)
 1842 B, p. 265. (*M. giganteum*, *Tetracaulodon godmanii*, *T. tapiroides*, *T. kochii*.)
 1843 A, p. 46 ("Tetracaulodon"); p. 48 (*M. giganteum*.)
 1846 A, p. 269. ("Tetracaulodon.")
- Hazeltine, J. 1835 A. ("Mastodon.")
- Hicks, L. E. 1873 A, p. 79. ("Mastodon.")
- Hitchcock, E. 1872 A. ("Mastodon.")
 1885 A. ("Mastodon.")
- Hodson, W. B. 1846 A, p. 12. (*M. giganteus*.)
- Holmes, F. S. 1849 A, p. 197. ("Dinotherium.")
 1850 B, p. 203. ("Dinotherium," "Mastodon.")
 1858 B, p. 442. ("Mastodon.")
- Holmes, N. 1857 A. (*M. giganteus*.)
- Horner, W. E. 1840 A, p. 281 (*M. giganteum*); p. 282 (*Missourium kochii*).
 1841 A. ("Mastodon.")
 1841 B, p. 308. ("Tetracaulodon.")
 1842 A, p. 53. ("Mastodon.")
- Horner and Hays 1842 A, pls. i-iv. ("Mastodon.")
- Hoy, P. R. 1871 A, p. 147. (*M. giganteus*.)
- Hunt, J. G. 1874 A. ("Mastodon.")
- Hunter, W. 1769 A, pl. iv, figs. 1, 3, 5. ("Pseudo-elephant," "animal incognitum.")
- Hutchinson, H. N. 1893 A, p. 217, pl. xxi.
- Jackson, J. B. S. 1845 A. (*M. giganteus*.)
- Kaup, J. J. 1843 A, p. 172 (*M. cuvieri*, *M. jeffersoni*, *M. giganteus*); p. 173 (*Tetracaulodon bucklandi*, *T. godmani*); p. 174 (*M. collinsii*).
- Kindle, E. M. 1898 A, p. 485.
- Klippart, J. H. 1875 B. ("Mastodon.")
- Koch, A. C. 1839 A. ("Mammoth.")
 1839 B. ("Mastodon," "Missourian.")
 1840 A. (*Missourium kochii*.)
 1841, Description of the Missourian. (*Leviathan missouriensis*, *Tetracaulodon tapiroides*, *T. osagei*, *T. kochii*.)
 1842 A, p. 715. (*Tetracaulodon godmani*, *T. kochi*, *T. tapiroides*.)
 1843 A. (*Leviathan missouriensis*, *Missourium theristocaulodon*.)
 1845 A. (*Mastodon rugatum*, *Tetracaulodon godmani*, *T. haysii*, *T. kochii*, *Missourium theristocaulodon*.)
 1851 A. (*M. giganteum*.)
 1857 A. (*M. giganteum*.)
 1858 A. (*M. giganteum*.)
- Lapham, I. A. 1855 A. (*M. giganteus*.)
- Lathrop, S. P. 1851 A. ("Mastodon.")
- Leidy, J. 1849 A, p. 182.
 1858 D. ("Mastodon")
 1860 B, p. 108, pl. xix, figs. 1-3. (*M. ohioiticus*.)
 1868 A, p. 175.
 1869 A, pp. 240, 392.
 1870 M, p. 96.
 1871 C, p. 358.
- Leidy, J. 1871 D.
 1871 F, p. 113.
 1873 B, pp. 237, 255, 330, pl. xxii, figs. 5, 6; pl. xxviii, fig. 9.
 1877 A, p. 213.
 1884 A.
 1884 B.
 1889 B, p. 9.
- Leidy and Lucas 1896 A, p. 16.
- Lesley, J. P. 1889 A, p. 380.
- Lockwood, S. 1883 A.
- Lortet and Chantre 1879 A, p. 291.
- Lydekker, R. 1886 B, p. 15, fig. 3.
- Lyell, C. 1843 B. (*M. giganteum*.)
- McCallie, S. W. 1892 A. ("Mastodon.")
- Marsh, O. C. 1867 A. (*M. ohioiticus*.)
 1875 F. ("Mastodon.")
 1877 E. ("Mastodon.")
 1884 F, fig. 74.
 1885 B, fig. 107.
 1892 I, p. 350, pl. viii.
 1893 E, pl. viii.
 1897 C, pl. xxxi.
- Maxwell, J. B. 1845 A. ("Mastodon.")
- Miller, G. S. 1899 B, p. 373.
- Mitchell, S. L. 1818 A, pl. vi, figs. 1-4; pl. viii, figs. 1-3. ("Mastodon.")
- Moore, J. 1897 A, p. 277, plate.
- Nasmith, A. 1842 A, p. 776 (*M. giganteum*); p. 777 (*Tetracaulodon godmani*, *T. kochii*, *T. tapiroides*).
- Newberry, J. S. 1870 A, p. 77. (*M. giganteum*.)
- Nicholson and Lydekker 1889 A, p. 1397.
- Osborn, H. F. 1898 Q, p. 19.
 1899 G, p. 539. (*Mastodon*.)
- Owen, R. 1842 E, p. 689. (*M. giganteum*.)
 1845 B, p. 616, pl. cxliv, figs. 1-11, 13, 14. (*M. giganteus*.)
 1846 A, p. 94. (*M. giganteus*.)
 1846 B, pp. 273, 290, fig. 102. (*M. giganteus*.)
 1847 D. (*M. giganteus*.)
 1860 E, p. 353. (*M. ohioiticus*.)
 1866 B, p. 441, fig. 297. (*M. giganteus*.)
- Packard, A. S. 1868 A, p. 33. (*M. giganteus*.)
- Panton, J. H. 1891 A. (*M. giganteus*.)
 1892 A. (*M. giganteus*.)
- Pavlov M. 1894 A, pl. i; pl. ii, fig. 2. (*M. ohioiticus*.)
- Peale, R. 1802 A. ("Mammoth.")
 1802 B, pl. v, fig. 1. ("Mammoth.")
 1803 C. ("Mammoth.")
- Pictet, F. J. 1853 A, p. 302. (*Tapirus mastodontoides*.)
- Prime, A. J. 1845 A, pl. iv. ("Mastodon.")
- Putnam, F. W. 1884 A, p. 112. ("Mastodon.")
 1885 A. ("Mastodon.")
- Quart. Jour. Geol. Soc., 1845, i, p. 566. (*M. giganteus*.)
- Quenstedt, F. A. 1852 A, p. 53, pl. iv, figs. 7, 8 (*M. giganteum*.)
 1885 A, p. 73, pl. v, figs. 7, 8. (*M. giganteum*.)
- Rice, F. P. 1885 A.
- Richardson, J. 1854 A, p. 101 (*Elephas rupertianus*); p. 141 (*M. rupertianus*).
 1854 B. (*M. giganteus*.)
 1855 A, p. 131. (*M. giganteus*.)
- Roger, O. 1896 A, p. 160.

- Safely, R. 1866 A, p. 426. ("Mastodon.")
 Savage, J. 1878 A, p. 1011 (Mastodon ohioiticus.)
 Shaler, N. S. 1871 A, p. 162. (M. ohioiticus.)
 Shurtleff, N. B. 1846 A. (M. giganteus.)
 Silliman, B., sr. 1835 A, p. 165. ("Mastodon.")
 Silliman, B., jr. 1868 A. ("Mastodon;" may be some other species.)
 Smith, J. A. 1846 A, p. 19. ("Mastodon.")
 Steinmann and Döderlein 1890 A, p. 759.
 Stewart, T. P. 1828 A.
 Todd, A. 1876 A. (M. angustidens.)
 Troost, G. 1835 A, pp. 139, 236. ("Mastodon.")
 Trouessart, E. L. 1898 A, p. 704.
 Turner, G. 1799 A. ("Mastodon", "Incognitum.")
 T. R. J. 1889 A. ("Mastodon.")
 Van Rensselaer, J. 1826 A. (M. giganteum.)
 1827 A. ("Mastodon.")
 1828 A. (M. giganteum.)
 Wailes, B. L. C. 1854 A, pp. 284, 286. (M. giganteus.)
 Warren, J. C. 1846 A. (M. giganteus.)
 1852 B. (M. giganteus.)
 1852 C, pls. i-xxvi+i. (M. giganteus.)
 1853 A, figs. 1-3. (M. giganteus.)
 1855 A. (M. giganteus.)
 1855 C. (M. giganteus.)
 1856 A. (M. giganteus.)
 Wheatley, C. M. 1871 A, p. 236.
 Wheeler, W. 1878 A, p. 11 ("Mastodon.")
 Whipple, S. H. 1844 A. ("Mastodon.")
 Whitfield, R. P. 1891 A. ("Mastodon.")
 Whitney, J. D. 1879 A, p. 252.
 Whittlesey, C. 1848 A, p. 215. ("Mastodon.")
 Wilder, B. G. 1871 A, p. 58. ("Mastodon.")
 Williston, S. W. 1897 I, p. 301.
 1898 I, p. 91.
 Winchell, A. 1864 A. ("Mastodon.")
 ? Winslow, C. 1857 A. (M. giganteus.)
 1868 A, p. 407. ("Mastodon.")
 Wistar, C. 1818 A. ("Mastodon.")
 Wizlizenius, A. 1858 A. (M. giganteus.)
 Woolworth, S. 1847 A, p. 31, fig. 2. ("Mastodon.")
 Worthen, A. H. 1871 A. ("Mastodon.")
 Wyman, J. 1850 A, p. 57. (M. giganteus.)
 1853 B. ("Mastodon.")
 1862 A, p. 422. ("Mastodon.")
 Yates, L. G. 1874 B.
 Zittel, K. A. 1893 B, p. 464.
 Pleistocene: Virginia, Ohio, Michigan, New Jersey, Connecticut, Massachusetts, Maryland, South Carolina, Texas, Kansas, Colorado, California, Tennessee, Illinois, Indiana, Pennsylvania, New York, Mississippi, Manitoba, Cape Breton Island, Ontario, etc.

Mammot brevidens (Cope).

- Cope, E. D. 1889 J, pp. 199, 200, 201, fig. 5. (Tetrabelodon.)
 1884 V, p. 525. (Mastodon proavus.)
 1886 B, p. 359. (Mastodon proavus.)
 1886 H. (Mastodon proavus.)
 Matthew, W. D. 1899 A, p. 68. (Tetrabelodon.)
 Roger, O. 1896 A, p. 160. (Mastodon.)
 Scott, W. B. 1893 B, p. 659. (Mastodon proavus.)
 1895 C, p. 179. (Mastodon proavus.)
 Trouessart, E. L. 1898 A, p. 701. (Mastodon.)
 Zittel, K. A. 1893 B, p. 465. [Mastodon (Trilophodon).]
 Miocene (Loup Fork); Montana.

Mammot campestre (Cope).

- Cope, E. D. 1878 C, p. 225. (Tetrabelodon.)
 1878 N, p. 128. (Mastodon.)
 1884 G, p. 5. (Mastodon.)
 1884 V, pp. 524, 526. (Mastodon.)
 1889 J, pp. 195, 204, pls. ix, x. (Tetrabelodon.)
 1893 A, p. 61. (Tetrabelodon.)
 Lydekker, R. 1866 B, p. xi. (Mastodon.)
 Matthew, W. D. 1899 A, p. 68. (Tetrabelodon.)
 Roger, O. 1896 A, p. 160. (Mastodon.)
 Trouessart, E. L. 1898 A, p. 702. (Mastodon.)
 Zittel, K. A. 1893 B, p. 465. [Mastodon (Tetrabelodon).]
 Miocene (Loup Fork); Kansas, Nebraska.

Mammot chapmani (Cope).

- Cope, E. D. 1874 J, p. 222. (Mastodon.)
 1875 F, p. 73. (Mastodon.)
 1877 K, pp. 314, 315. (Mastodon.)
 Hays, I. 1834 A, explan. pl. xxii, figs. 3, 4. (No specific name.)
 Leidy, J. 1869 A, pp. 248, 396. (Mastodon.)
 Trouessart, E. L. 1898 A, p. 701. (Syn. of Mastodon obscurus.)

The origin of the specimen on which this species rests is unknown. It is not certainly known to be American.

Mammot euhypodon (Cope).

- Cope, E. D. 1884 V, pp. 524, 525. (Mastodon.)
 1884 G, p. 5. (Mastodon.)
 1889 J, pp. 195, 202, pl. xiii, text fig. 7. (Tetrabelodon.)
 Lydekker, R. 1866 B, p. xi. (Mastodon.)
 Matthew, W. D. 1899 A, p. 68. (Tetrabelodon.)
 Roger, O. 1896 A, p. 160.
 Trouessart, E. L. 1898 A, p. 702. (Mastodon euhypodon.)
 Wagner, G. 1899 A, p. 103. (Syn.? of M. shepardii.)
 Zittel, K. A. 1893 B, p. 465. (Mastodon euhypodon.)
 Miocene (Loup Fork); Kansas.

Mammot floridanum (Leidy).

- Leidy, J. 1866 B, p. 11. (Mastodon.)
 Cope, E. D. 1889 J, p. 205. (Tetrabelodon floridanus; syn.? of T. serridens.)
 1892 AA. (Syn.? of Mastodon serridens.)
 Leidy, J. 1866 C. (Mastodon.)
 1887 A. (Mastodon.)
 1890 C. (Mastodon.)
 1892 A. (Mastodon.)
 Leidy and Lucas 1892 A, pp. viii, 15, pls. i-vii (Mastodon.)
 Trouessart, E. L. 1898 A, p. 702. (Mastodon.)
 Wagner, G. 1899 A, p. 103. (Syn.? of Tetracaulodon shepardii.)
 Zittel, K. A. 1893 B, p. 465. (Mastodon.)
 Pliocene; Florida.

Mammot humboldtii (Cuvier).

- Cuvier G. 1825, Oss. Foss., ed. 2, vol. v, pt. ii, p. 527. (Mastodon.)
 The specific name is usually spelled *humboldtii*. The original form is here adopted.
 Ameghino, F. 1889 A, p. 645. (Mastodon.)
 Blainville, H. M. D. 1864 A (1845), iii, pp. 249-285, 302. (Mastodon.)

- Burmeister, H. 1867 A, p. 288, pl. xiv. (Mastodon.)
 1889 A, p. 33. (Mastodon.)
 Cope, E. D. 1884 G, pp. 5, 7. (Dibelodon.)
 1884 V, p. 525. (Mastodon.)
 1889 J, p. 195. (Dibelodon.)
 1892 BB, p. 1059. (Dibelodon.)
 1893 A, p. 60, pl. xvi, figs. 2-4; pl. xvii, fig. 4. (Dibelodon.)
 Cuvier, G. 1806 C, p. 413. ("Mastodonte humboldien.")
 1812, Oss. Foss., ed. 1, vol. ii, art. xi, p. 13. ("Mastodonte humboldien.")
 Gervais, P. 1855 A, p. 18, pl. v, figs. 9, 10. (M. humboldii.)
 Gervais and Ameghino 1880 A, p. 109. (Mastodon.)
 Lydekker R. 1886 B, p. 41, fig. 10. (Mastodon.)
 Matthew, W. D. 1899 A, p. 75. (Dibelodon.)
 Meyer, H. 1867 B, p. 64, pl. vi. (Mastodon.)
 Roger, O. 1896 A, p. 161.
 Trouessart, E. L. 1898 A, p. 704. (Mastodon.)
 Wyman, J. 1855 C, p. 279, pl. xiii. (Mastodon.)
 Zittel, K. A. 1893 B, p. 464. (Mastodon.)
 Pliocene (Blanco); South America, Texas.

Mammut mirificum (Leidy).

Leidy, J. 1858 B. (Mastodon.)
 The following authors refer to this species under the name *Mastodon mirificus*.

- Cope, E. D. 1874 J, p. 222.
 1877 K, p. 313.
 1878 C, pp. 226, 227.
 1884 V, p. 526.
 1889 J, pp. 196, 206.
 1892 G, p. 228.
 1893 A, pp. 61, 62.
 Hayden, F. V. 1858 B, p. 157.
 King, C. 1878 A, p. 412.
 Leidy, J. 1858 E, p. 28. [M. (Tetralophodon).]
 1869 A, pp. 249, 396, pl. xxv, figs. 1, 2.
 1870 J, p. 67.
 1871 A, p. 64.
 1871 C, p. 358.
 1873 B, pp. 237, 330.
 Lydekker, R. 1886 B, p. xi.
 Matthew, W. D. 1899 A, p. 69. (Dibelodon.)
 Roger, O. 1896 A, p. 160.
 Trouessart, E. L. 1898 A, p. 705.
 Zittel, K. A. 1893 B, p. 465.
 Miocene (Loup Fork); Nebraska.

Mammut obscurum (Leidy).

Leidy, J. 1869 A, p. 396, pl. xxvii, figs. 13, 152, 162.
 Unless otherwise indicated, the following writers call this species *Mastodon obscurus*.

- Cope, E. D. 1872 DD.
 1874 J, p. 221.
 1875 V, p. 51.
 1877 K, p. 315.
 1880 S.
 1884 V, p. 526.
 1889 J, pp. 196, 200, 203. (Tetralodon.)
 Croom, H. B. 1835 A, p. 170. (M. angustidens.)
 Dana, J. D. 1879 A, p. 233.
 Emmons, E. 1858 B, p. 198, fig. 23. (M. giganteus.)
 Gibbes, R. W. 1850 E. (M. angustidens.)
 Harlan, R. 1842 B, p. 143. (M. longirostris.)

- Leidy, J.* 1858 D, p. 12. ("Mastodon.")
 1870 M, p. 99.
 1871 A, p. 64.
 1871 C, p. 358.
 1873 B, pp. 281, 330 (in part), pl. xxii, figs. 1-4.
 Lydekker, R. 1884 B, p. 28.
 1886 B, pp. x, 30.
 Lyell, C. 1843 B, p. 128. (M. longirostris.)
 1845 A, p. 427. (M. longirostris.)
 Marsh, O. C. 1897 C, p. 527.
 Roger, O. 1896 A, p. 160.
 Trouessart, E. L. 1898 A, p. 701.
 Warren, J. C. 1850 A. (M. angustidens.)
 1852 A. (M. angustidens.)
 1852 C, p. 78, pl. xxvi. (M. angustidens.)
 Whitfield, R. P. 1888 A, p. 252.
 Whitney, J. D. 1879 A, p. 252.
 Zittel, K. A. 1893 B, p. 465.

Founded on a cast of a tooth said to have come from the Miocene of Maryland; also reported from North Carolina, South Carolina, Colorado (Pliohippus beds).

Mammut præcursor (Cope).

- Cope, E. D.* 1893 A, p. 64, pls. xviii, xix. (Dibelodon.)
 1892 BB, p. 1059. (Mastodon præcursor; no description.)
 1893 C, p. 203. (Mastodon.)
 Matthew, W. D. 1899 A, pp. 69, 75. (Dibelodon.)
 Roger, O. 1896 A, p. 160.
 Trouessart, E. L. 1898 A, p. 702. (Mastodon.)
 Miocene (Loup Fork); Texas. Pliocene (Blanco); Texas.

Mammut proavus (Cope).

- Cope, E. D.* 1873 CC, p. 10. (Mastodon.)
 Unless otherwise indicated, the following writers call this species *Mastodon proavus*.
Cope, E. D. 1874 B, p. 531.
 1874 J, p. 222.
 1874 P, p. 22.
 1884 G, p. 5. (M. angustidens.)
 1884 V, p. 525. (M. angustidens var.)
 1889 J, pp. 195, 202, pl. xi; text fig. 6. (Tetralodon angustidens proavus.)
 1892 E, p. 253. ("M. angustidens type.")
Lydekker, R. 1884 B, p. 17.
 1886 B, p. x.
 Matthew, W. D. 1899 A, p. 66. (Tetralodon angustidens.)
 Roger, O. 1896 A, p. 160.
 Scott, W. B. 1893 B, p. 659.
 Trouessart, E. L. 1898 A, p. 702.
 Zittel, K. A. 1893 B, p. 465.
 Miocene (Loup Fork); Kansas, Nebraska, Colorado, New Mexico.

Mammut productum Cope.

- Cope, E. D.* 1874 J, p. 221. (Mastodon.)
 Unless otherwise indicated, the following authors call this species *Mastodon productus*.
Amér. Jour. Science 1875 A, p. 222.
Cope, E. D. 1875 F, p. 72.
 1877 K, pp. 24, 306, pls. lxx, lxxii.
 1884 G, p. 5.
 1884 V, p. 524.

Cope, E. D. 1889 J, pp. 195, 204. (Tetrabelodon.)

1893 A, p. 58.

1893 C, p. 203.

Leidy, J. 1873 B, pp. 235, 330 (in part), pl. xxii, figs. 1-4. (M. obscurus.)

Lydekker, R. 1886 B, p. x.

Matthew, W. D. 1899 A, p. 68. (Tetrabelodon.)

Roger, O. 1896 A, p. 160.

Trouessart, E. L. 1898 A, p. 702.

Zittel, K. A. 1893 B, p. 465.

Miocene (Loup Fork); New Mexico.

Mammut rugosidens Leidy.

Leidy, J. 1890 B. (Mastodon.)

Roger, O. 1896 A, p. 161. (Mastodon.)

Trouessart, E. L. 1898 A, p. 702. (Mastodon.)

Zittel, K. A. 1893 B, p. 465. (Mastodon.)

Upper Pliocene; South Carolina.

Mammut serridens (Cope).

Cope, E. D. 1884 V, pp. 524, 525, pl. iii, figs. 2, 3. (Mastodon.)

1884 G, pp. 5, 7. (Mastodon.)

1885 S. (Mastodon.)

1889 F, p. 164. (Mastodon.)

1889 J, pp. 200, 205, fig. 8. (Tetrabelodon.)

1892 AA. (Mastodon.)

1893 A, p. 18, pl. iii, figs. 2, 3. (Tetrabelodon serridens cimarronis.)

Leidy and Lucas 1896 A, p. 18. (Mastodon.)

Lydekker, R. 1886 B, p. x. (Mastodon.)

Matthew, W. D. 1899 A, p. 68. (Tetrabelodon.)

Roger, O. 1896 A, p. 160. (Mastodon.)

Trouessart, E. L. 1898 A, p. 702. (Mastodon.)

Zittel, K. A. 1893 B, p. 465. (Mastodon.)

Miocene (Loup Fork); Texas.

Mammut shepardi (Leidy).

Leidy, J. 1870 M, p. 98. (Mastodon.)

Bowers, S. 1889 A. (Mastodon.)

Cope, E. D. 1874 J, p. 222. (Mastodon.)

1884 G, p. 5. (Dibelodon.)

1884 V, pp. 524, 525. (Mastodon.)

1889 F. (Dibelodon.)

Cope, E. D. 1889 J, p. 204. (Dibelodon shepardi, D. tropicus.)

1892 E, p. 253. (Dibelodon.)

1892 G, p. 228. (Mastodon.)

1893 A, p. 57, pl. xv. (Tetrabelodon.)

1893 C. (Tetrabelodon.)

1893 P, p. 473, pl. xii. (Tetrabelodon.)

1893 Q, p. 812. (Tetrabelodon.)

Felix and Lenk 1891 A, p. 132, pl. xxx, fig. 1. (Mastodon.)

Leidy, J. 1871 A, p. 64. (Mastodon.)

1871 C, p. 358. (Mastodon.)

1871 J. (Mastodon.)

1872 K, p. 142. (M. obscurus.)

1873 B, pp. 231, 330 (in part), pl. xxi, figs. 1-4. (M. obscurus.)

Matthew, W. D. 1899 A, p. 75. (Tetrabelodon.)

Roger, O. 1896 A, p. 161. (Mastodon.)

Trouessart, E. L. 1898 A, p. 702. (Mastodon.)

Wagner, G. 1899 A, p. 99, pls. xxiv, xxv. (Tetracaulodon.)

Zittel, K. A. 1893 B, p. 465. (Mastodon.)

Pliocene (Blanco); California, Texas, Kansas, Mexico.

Mammut tropicum (Cope).

Cope, E. D. 1884 G, p. 7. (Dibelodon.)

1889 J, pp. 195, 198. (Dibelodon.)

1892 G, p. 227. (Mastodon successor.)

1892 J, p. 123. (Mastodon sp.)

1892 BB, p. 1059. (Dibelodon.)

1893 A, pp. 58, 59, 62, pl. xvi, fig. 1; pl. xvii, figs. 1-3. (Dibelodon.)

1893 C, p. 203. (Dibelodon.)

Felix and Lenk 1891 A, p. 133. (Mastodon.)

Lydekker, R. 1886 B, p. xi. (Mastodon.)

Matthew, W. D. 1899 A, p. 75. (Dibelodon.)

Meyer, H. 1867 B, p. 64, pl. vi. (Mastodon humboldtii.)

Roger, O. 1896 A, p. 161. (Mastodon successor.)

Trouessart, E. L. 1898 A, p. 703. (Mastodon.)

Zittel, K. A. 1893 B, p. 46. (Syn. of Mastodon humboldtii.)

Pliocene (Blanco); Texas, Mexico, South America.

ELEPHAS Linn. Type *E. maximus* Linn.

Linnæus, C. 1758 Syst. Nat., ed. 10, i, p. 33.

Adams, A. L. 1874 A.

1877 B.

1879 A.

1881 A.

Blainville, H. M. D. 1867 A, iii, S, plates.

Brandt, J. F. 1869 A, p. 34.

Cope, E. D. 1889 J, p. 194.

1893 M, p. 1015.

Cuvier, G. 1806 A.

1834 A, i, p. 455, ii, pp. 1-373.

Falconer, H. 1857 B. (Elephas, with subgenera Stegodon, Loxodon, and Euelephas.)

1865 A.

1868 A.

Falconer and Cautley, 1846 A.

Flower, W. H. 1876 B, xiii, p. 351.

1883 D, p. 425.

1885 A.

Flower and Lydekker, 1891 A, p. 424.

Gaudry, A. 1878 B, p. 175.

Grant, E. 1842 A, p. 771.

Gray, J. E. 1869 A, p. 359.

Leuthardt, F. 1891 A.

Lydekker, R. 1880 A, pp. 197, 256.

1886 B, p. 78.

Marsh, O. C. 1877 E.

Möbius, K. 1892 A.

Naumann, E. 1879 A.

Nicholson and Lydekker, 1889 A, p. 1401.

Owen, R. 1844 A, p. 298.

1845 B, p. 625.

1868 A, p. 360, figs. 289-292.

Paulli, S. 1900 A, p. 236.

Pictet, F. J. 1853 A, p. 280.

Pohlig, H. 1889 A.

1892 B.

Quenstedt, F. A. 1885 A, p. 67.

Röse, C. 1893 A.

Rütimeyer, L. 1888 A, p. 11.

- Scott, W. B. 1887 A.
 Steinmann and Döderlein 1890 A, p. 760.
 Thomas, O. 1890 A.
 Turner, H. N. 1848 A, p. 71.
 Weber, M. 1898 A, p. 135.
 Weithofer, K. A. 1890 A.
 1893 A.
 Woodward, A. S. 1898 B, p. 305.
 Zittel, K. A. 1893 B, p. 467.
- Elephas columbi** Falconer.
Falconer, H. 1857 B, p. 319. [E. (Euelephas).]
 Bell, R. 1898 A, p. 371, fig. 1.
 Blake, C. C. 1862 A, pl. iv. (E. texianus.)
 1862 B. (E. texianus.)
 Briggs and Foster in Billings, E. 1863 A, figs. 1-5.
 (E. jacksoni.)
 Cope, E. D. 1874 J, p. 221. (E. primigenius columbi.)
 1889 J, p. 209, pl. xiv. (E. primigenius columbi.)
 1894 A, p. 68. (E. primigenius var.)
 Cragin, F. W. 1896 A, p. 53. (E. imperator?).
 Dall, W. H. 1891 A.
 Dawkins, W. B. 1870 A, p. 232.
 Donald, J. F. 1871 A. (E. primigenius var. jacksoni.)
 Edwards, A. M. 1865 A.
 Falconer, H. 1868 A, ii, p. 212, pl. x.
 Felix and Lenk 1891 A, p. 131.
 Gervais and Ameghino 1880 A, p. 213.
 Hayden, F. V. 1858 B, p. 157.
 ?Kindle, E. M. 1898 A, p. 485. (E. americanus.)
 Leidy, J. 1858 B, p. 10. (E. imperator.)
 1858 E, p. 29. [E. (Euelephas) imperator.]
 1869 A, p. 397. (E. americanus in part.)
 1870 M, p. 97.
 1871 C, p. 359. (E. americanus, part.)
 1873 B, pp. 238, 329. (E. americanus, part.)
 1873 G.
 1875 A, p. 121. (E. americanus, part.)
 1877 A, p. 213. (E. americanus.)
 1889 D, p. 17, pl. iii, figs. 8, 9. (E. americanus, or E. columbi.)
 1892 A, p. 129.
 Logan, W. E. 1863 A, p. 914, figs. 495-498. (Euelephas jacksoni.)
 Lucas, F. A. 1900 A, p. 349.
 Lydekker, R. 1886 B, pp. xi, 171.
 Mather, W. W. 1838 A, p. 362. (E. jacksoni.)
 Miller, G. S. 1899 B, p. 373.
 Nicholson and Lydekker 1889 A, p. 1406.
 Owen, R. 1859, Rep. Brit. Assoc. Adv. Sci. for 1858, p. lxxxvi. (E. texianus, without description.)
 Pohlig, H. 1887 A, p. 117. (E. trogontheri?, E. columbi.)
 1889 A, p. 247. (E. columbi, E. imperator.)
 1892 B, p. 327.
 Trouessart, E. L. 1898 A, p. 711.
 Zittel, K. A. 1893 B, p. 473.
 Pleistocene; Georgia, South Carolina, Alabama, Texas, Colorado, Oregon, New Mexico, California, New York?, Florida, Mexico, Northwest Territory, Hudson Bay.
- Elephas primigenius** Blumenbach.
Blumenbach, J. F., 1803, Handb. Naturg., 1st French ed., vol. ii, p. 407. (Fide Lydekker.)
- Adams, A. L. 1879 A.
 1881 A.
 Agassiz, L. 1850 A, p. 100. ("Elephant.")
 Amer. Geologist 1891 F.
 Amer. Jour. Science 1853 B, p. 146.
 Anonymous 1834 A. ("Elephant.")
 1837 A. ("Elephant.")
 Baer, K. E. 1866 A.
 1867 A.
 Barbour, E. H. 1890 A
 Barton, B. S. 1805 A, p. 98. ("Elephant.")
 Bell, R. 1898 A.
 Beyer, S. W. 1899 A, p. 211.
 Blainville, H. M. D. 1864 A, iii S, pls. iii, v, vi, viii, x.
 Blake, W. P. 1855 A.
 1864 A. ("Elephas.")
 1867 B.
 1900 A, p. 257.
 Blatchley, W. S. 1898 A, p. 89.
 Brandt, J. F. 1848 A.
 1866 A.
 1866 B.
 1867 A.
 Buckland, W. 1831 A, p. 594, pls. i, ii.
 Carpenter, W. M. 1846 A, p. 249. ("Elephant")
 Chaloner, A. D. 1843 A, p. 321. ("Elephant.")
 Charlton, O. C. 1890 A.
 Cooper, W. 1831 A, p. 168.
 1843, Proc. Geol. Soc. Lond., p. 33. ("Mammoth.")
 Cooper, Smith, and De Kay 1831 A, p. 371. ("Elephant.")
 Cope, E. D. 1884 G, p. 8.
 1888 B, p. 293.
 1889 F.
 1889 J, p. 207, pl. xvi, fig. 20.
 1889 S.
 1893 A, p. 87.
 1894 A, p. 68.
 1894 H, p. 453.
 Cope and Wortman 1884 A, p. 32, pl. vi, figs. 2-5.
 Cottle, T. 1852 A.
 1853 A.
 Couper, J. H. 1842 A, p. 217. ("Mammoth.")
 1846 in Hodson, W. B. 1846 A, p. 45.
 Cuvier, G. 1799 A, p. 15, pls. v, vi. ("Mammoth.")
 1806 A, pp. 45, 149, 264.
 1834 A, ii, pp. 1-246, with plates.
 C. D. 1838 A.
 Dall, W. H. 1869 A.
 1873 A.
 Davison, C. 1894 A.
 Dawkins, W. D. 1870 A, p. 233.
 Dawson, G. M. 1894 A.
 De Kay, J. G. 1842 C, p. 100 (E. primigenius); p. 101, pl. xxxii (E. americanus).
 Diffenberger, F. R. 1873 A. (E. americanus.)
 Dupont, E. 1867 A.
 Duralde, M. 1804 A.
 Edwards, A. M. 1865 A.
 Edwards, T. 1793 A. (No name.)
 Emmons, E. 1858 B, p. 200, fig. 24.
 Falconer, H. 1857 B. [E. (Euelephas) primigenius.]
 1865 A.
 Falconer and Cautley 1846 A, pl. i, fig. 1; pl. xiii. A, figs. 1-3; pl. xiii B, figs. 1-3.

- Felix and Lenk 1891 A, pp. 126, 131.
 Flower, W. H. 1876 B, xiii, 351.
 1883 C.
 Flower and Lydekker 1891 A, p. 428, figs. 184, 185.
 Foster, J. W. 1838 A, p. 79. (E. primigenius.)
 1839 A, p. 190, fig. 2. ("Elephant.")
 1857 A.
 1872 A, p. 143. (E. mississippiensis.)
 Gaudry, A. 1872 A.
 1873 A.
 Gazley, S. 1830 A. ("Elephant.")
 Geinitz, H. B. 1885 A, p. 66, pl. iii.
 Gibbes, R. W. 1850 D.
 Giebel, C. G. 1847 A, p. 208.
 Godman, J. D. 1828 A, ii, pp. 255-265.
 Harlan, R. 1823 A. ("Elephant.")
 1825 A, p. 207.
 1828 A, p. 189.
 1834 B, p. 57.
 1835 B, p. 263.
 1835 G, p. 359. ("Elephant.")
 1842 E.
 Haymond, R. 1844 A, p. 294. ("Megatherium.")
 Hays, I. 1844 A, p. 43. ("Elephant.")
 Higley, W. K. 1866 A, plate.
 Holmes, F. S. 1850 B, p. 203. ("Elephant.")
 Horner, W. E. 1840 A, p. 299. ("Elephant.")
 Howorth, H. W. 1870 A.
 1881 A.
 1881 B.
 1892 A.
 1893 A.
 1894 A.
 Hutchinson, H. N. 1893 A, p. 193, pl. xx.
 Kindle, E. M. 1898 A, p. 485.
 Lambe, L. M. 1898 A, p. 136.
 Landois —, 1871 A, p. 47, pl. ix.
 Leidy, J. 1854 A, p. 9. (E. americanus.)
 1860 B, p. 108, pl. xviii. (E. americanus.)
 1869 A, pp. 251, 397. (E. primigenius, E. americanus.)
 1870 K, p. 69. (E. americanus.)
 1871 C, p. 359 (E. americanus.)
 1875 A. (E. americanus, part.)
 1877 A, p. 212. (E. americanus.)
 1889 D, p. 17, pl. iii, figs. 6-9.
 1889 E, p. 22.
 Lucas, F. A. 1899 A, p. 764.
 1900 A, p. 349, figures.
 Lydekker, R. 1886 B, p. 175, figs. 30-32.
 Lyell, C. 1843 C, p. 33. ("Elephant.")
 Madison, —. 1806 A, p. 486.
 Marsh, O. C. 1877 E, p. 367. (E. americanus.)
 Meyer, H. 1852 A, pl. xiv, figs. 1-4.
 Mitchell, S. L. 1818 A, pl. vi, figs. 2, 3, 5, 6. ("Elephant.")
 Möbius, K. 1892 A.
 Nature 1871 A.
 Naumann, E. 1879 A, pls. i-vii.
 Newberry, J. G. 1870 A, p. 77. (E. primigenius.)
 Newberry, J. G. 1871 A, p. 241. (E. americanus.)
 Nicholson and Lydekker 1889 A, pp. 1404, 1406.
 Owen, R. 1844 A, p. 210.
 1845 B, p. 628, pl. cxlviii, figs. 5-8.
 1846 B, p. 217, figs. 85, 86, 90-95.
 1847 A.
 Packard, A. S. 1868 A, p. 33. (E. americanus.)
 1886 A.
 Pantou, J. H. 1891 A.
 1892 A.
 Parker, H. W. 1884 A.
 Pictet, F. J. 1853 A, p. 283.
 Pohlig, H. 1887 A, p. 117.
 1887 B, p. 254.
 1889 A, p. 248. (E. primigenius, E. americana.)
 1892 B, p. 327. (E. primigenius, E. americana.)
 Quenstedt, F. A. 1885 A, p. 68, pl. iv, figs. 11-19.
 Richardson, J. 1854 A, p. 11 (Mastodon giganteus);
 p. 141 (E. primigenius).
 1855 A, p. 132.
 Rogers, H. D. 1854 A.
 Schmidt, F. 1872 A.
 Shaler, N. S. 1871 A, p. 148.
 1871 B, p. 167.
 Steinmann and Döderlein 1890 A, p. 761.
 Steitz, A. 1870 A.
 Stirrup, M. 1893 A.
 1894 A.
 Thompson, Z. 1850 A, p. 256. ("Elephant.")
 1853 A, p. 14.
 Toll, E. 1895 A. ("Mammoth.")
 Troost, G. 1835 A, p. 143. (Elaphus primigenius)
 Trouessart, E. L. 1898 A, p. 711.
 Turner, G. 1799 A. ("Mammoth.")
 Van Rensselaer, J. 1828 A, ("Elephant.")
 Wailes, B. L. C. 1854 A, p. 286.
 Warren, J. C. 1852 C, p. 142.
 Weithofer, C. A. 1893 A.
 Whitney, J. D. 1879 A, p. 254.
 Williston, S. W. 1898 I, p. 91.
 Winchell, A. 1863 A.
 Winslow, C. F. 1857 A.
 1868 A.
 Wistar, C. 1818 A. ("Elephant.")
 Woodhull, A. A. 1872 A.
 Woodward, H. 1869 A.
 Woolworth, S. 1847 A, p. 31, fig. 1. (E. americanus.)
 Worthen, A. H. 1871 A.
 Wylie, T. A. 1859 A.
 Wyman, J. 1853 B.
 1857 A. ("Elephant.")
 Yates, L. G. 1874 B, p. 18.
 Zittel, K. A. 1893 B, p. 469, figs. 387-390.
 Pleistocene; New York, Vermont, New Jersey, Pennsylvania, Alaska, British Columbia, Ontario, Alberta, Mexico, Arizona, Montana, Colorado, Michigan, Kentucky, Ohio, Missouri, Illinois, Iowa, Indiana, Kansas, Georgia, North Carolina, South Carolina, Texas, Oklahoma, California, Oregon.

Order TILLODONTIA Marsh.

Marsh, O. C. 1875 C, p. 221.

Cope, E. D. 1875 C, p. 23.

1876 A, pp. 3, 4. (Tillodonta.)

1877 K, pp. 85, 370. (Tillodonta.)

1882 E, p. 146.

1882 L.

1883 I, p. 79.

1884 O, pp. 186, 194, 739. (Tillodonta.)

1887 S, p. 343.

1889 C, p. 144.

1891 L, p. 1117.

1891 N, p. 73.

1893 M, p. 1015.

1898 B, p. 115.

Flower, W. H. 1876 B, xiii, p. 514.

Flower and Lydekker 1891 A, p. 441.

Gadow, H. 1898 A, p. 42.

Haeckel, E. 1895 A, pp. 501, 502.

Hay, O. P. 1899 F, p. 682.

Lydekker, R. 1887 A, p. 1.

Lydekker, R. 1896 B, p. 378.

Marsh, O. C. 1876 B, p. 249.

1876 G, p. 60.

1877 E.

1892 D, p. 448.

1895 D, p. 498.

Nicholson and Lydekker 1889 A, p. 1408. (Tillodonta, Anchippodontia.)

Osborn, H. F. 1888 F.

1893 D.

1898 A, p. 146.

Osborn and Earle 1895 A, p. 40.

Roger, O. 1896 A, p. 88.

Schlosser, M. 1890 C, p. 250.

Steinmann and Döderlein 1890 A, p. 728.

Tomes, C. S. 1898 A, p. 446.

Woodward, A. S. 1898 B, p. 374.

Wortman, J. L. 1885 A, p. 298.

1897 B, p. 61.

Zittel, K. A. 1893 B, pp. 503, 725.

ESTHONYCHIDÆ.

Cope, E. D. 1889 R, p. 876.

Haeckel, E. 1895 A, p. 502. (Esthonychida.)

Matthew, W. D. 1899 A, p. 42.

Nicholson and Lydekker 1889 A, p. 1409. (Platychoeropidæ.)

Roger, O. 1896 A, p. 88.

Steinmann and Döderlein 1890 A, p. 729.

Trouessart, E. L. 1898 A, p. 665. (Esthonychidæ.)

Zittel, K. A. 1893 B, p. 6.

ESTHONYX Cope. Type *E. bisulcatus* Cope.

Cope, E. D. 1874 O, p. 6.

1876 C.

1877 K, p. 153.

1882 E, p. 146.

1882 L.

1883 I, p. 77.

1884 O, pp. 194, 198, 202, 738.

1884 S, pp. 351, 479.

1885 T.

1885 X, p. 1208.

1888 I, p. 4.

1888 K, p. 163.

1889 C, p. 221.

Lydekker, R. 1885 D. (Syn. of Platychoerops.)

1887 A, p. 3.

Nicholson and Lydekker 1889 A, p. 1409.

Schlosser, M. 1890 C, p. 252.

Scott, W. B. 1892 D, p. 80.

Tomes, C. S. 1898 A, p. 446.

Woodward, A. S. 1898 B, p. 375.

Wortman, J. L. 1885 A, p. 299.

1886 A, p. 425.

1897 B, pp. 62, 63.

Zittel, K. A. 1893 B, p. 506.

Matthew, W. D. 1899 A, p. 31.

Roger, O. 1896 A, p. 88.

Trouessart, E. L. 1898 A, p. 665.

Eocene (Wasatch); New Mexico.

Esthonyx acutidens Cope.

Cope, E. D. 1881 D, p. 185.

1882 E, p. 148.

1884 O, pp. 204, 210, pl. xxiva, figs. 17-21.

Matthew, W. D. 1899 A, p. 36.

Roger, O. 1896 A, p. 88.

Trouessart, E. L. 1898 A, p. 665.

Wortman, J. L. 1897 B, p. 62.

Eocene (Wind River); Wyoming.

Esthonyx bisulcatus Cope.

Cope, E. D. 1874 O, p. 6.

1875 C, p. 24.

1877 K, p. 154, pl. xl, figs. 27-33.

1884 O, p. 204.

King, C. 1878 A, p. 377.

Matthew, W. D. 1899 A, p. 31.

Roger, O. 1896 A, p. 88.

Trouessart, E. L. 1898 A, p. 665.

Eocene (Wasatch); New Mexico.

Esthonyx burmeisterii Cope.

Cope, E. D. 1874 O, p. 7.

1875 C, p. 24.

1877 K, p. 156, pl. xl, fig. 26.

1882 E, p. 147.

1884 O, p. 204, pl. xxivc, figs. 1-10.

Esthonyx acer Cope.

Cope, E. D. 1874 O, p. 7.

1875 C, p. 24. (Syn. of *E. bisulcatus*.)

1877 K, p. 154. (Syn. of *E. bisulcatus*.)

1882 E, p. 148.

1884 O, p. 204.

1884 S, p. 480.

- Cope, E. D. 1884 S, p. 479, fig. 23.
 Lydekker, R. 1887 A, p. 3.
 Matthew, W. D. 1899 A, p. 31.
 Nicholson and Lydekker 1889 A, p. 1409, fig. 1290.
 Roger, O. 1896 A, p. 88.
 Trouessart, E. L. 1898 A, p. 665.
 Woodward, A. S. 1898 B, p. 375, fig. 212.
 Wortman, J. L. 1886 A, p. 425, fig. 207.
 Zittel, K. A. 1893 B, p. 506, fig. 419.
 Eocene (Wasatch); New Mexico, Wyoming.

***Esthonyx spatularius* Cope.**

- Cope, E. D. 1880 O, p. 908.
 1881 D, p. 187.
 1882 E, p. 148.
 1884 O, pp. 204, 211, pl. xxiva, figs. 22-25.
 1884 S, p. 479.
 Matthew, W. D. 1899 A, pp. 31, 36.
 Roger, O. 1896 A, p. 88.
 Trouessart, E. L. 1898 A, p. 665.
 Eocene (Wasatch, Wind River); Wyoming.

ANCHIPPODONTIDÆ.

- Gill, T. 1872 B, p. 87.
 Flower, W. H. 1876 C, p. 22. (Tillotheriidae.)
 Gadow, H. 1898 A, p. 42. (Tillotheriidae.)
 Haeckel, E. 1895 A, p. 502. (Tillotherida.)
 Lydekker, R. 1887 A, p. 1. (Anchippodontidae.)
 1896 B, p. 378. (Anchippodontidae.)
 Marsh, O. C. 1875 C, p. 221. (Tillotheriidae, Anchippodontidae.)

- Marsh, O. C. 1876 G, p. 60. (Tillotheriidae.)
 1877 E. (Tillotheriidae.)
 Nicholson and Lydekker 1889 A, p. 1408. (Anchippodontidae.)
 Roger, O. 1896 A, p. 88. (Tillotheriidae.)
 Steinmann and Döderlein 1890 A, p. 730. (Tillotheriidae.)
 Zittel, K. A. 1893 B, p. 506. (Tillotheriidae.)

TILLOTHERIUM Marsh. Type *T. hyracoides* Marsh.

- Marsh, O. C. 1873 H, p. 485.
 Cope, E. D. 1882 E, p. 146.
 1882 L.
 1884 O, p. 195.
 1888 I.
 1888 L.
 Flower, W. H. 1876 B, xlii, p. 514.
 1876 C, p. 123.
 Flower and Lydekker 1891 A, p. 441.
 Lydekker, R. 1887 A, p. 1.
 Marsh, O. C. 1875 B, p. 241.
 1875 C.
 1876 B, pls. viii, ix.
 1876 G, p. 60.
 1877 E.
 1895 D, p. 498.
 Nicholson and Lydekker 1889 A, p. 1408.
 Osborn, H. F. 1897 G, p. 252.
 Schlosser, M. 1890 C, p. 275.
 1892 A, p. 226.
 Steinmann and Döderlein 1890 A, p. 730.
 Tomes, C. S. 1898 A, p. 446.
 Woodward, A. S. 1898 B, p. 376.
 Wortman, J. L. 1886 A, p. 433.
 1897 B, pp. 61, 63.
 Zittel, K. A. 1893 B, p. 507.

***Tillotherium fodiens* Marsh.**

- Marsh, O. C. 1875 B, p. 241.
 Flower, W. H. 1876 C, p. 123, fig. 3.
 Flower and Lydekker 1891 A, p. 441, fig. 193.
 King, C. 1878 A, p. 404.

- Lydekker, R. 1887 A, p. 2, fig. 2.
 Marsh, O. C. 1876 B, p. 250, pl. viii; pl. ix, figs. 1-3; text fig. 1.
 1895 D, p. 498, fig. 48.
 Matthew, W. D. 1899 A, p. 42.
 Nicholson and Lydekker 1889 A, p. 1408, fig. 1289.
 Osborn, H. F. 1897 G, p. 257.
 Roger, O. 1896 A, p. 88.
 Trouessart, E. L. 1898 A, p. 666.
 Woodward, A. S. 1898 B, p. 376, fig. 213.
 Wortman, J. L. 1897 B, p. 63.
 Zittel, K. A. 1893 B, p. 507, fig. 420.
 Eocene (Bridger); Wyoming, Colorado.

***Tillotherium hyracoides* Marsh.**

- Marsh, O. C. 1873 H, p. 485.
 King, C. 1878 A, p. 404.
 Matthew, W. D. 1899 A, p. 42.
 Roger, O. 1896 A, p. 88.
 Trouessart, E. L. 1898 A, p. 666.
 Eocene (Bridger); Wyoming.

***Tillotherium latidens* Marsh.**

- Marsh, O. C. 1874 C, p. 533.
 1876 B, explan. pl. ix, fig. 4.
 Matthew, W. D. 1899 A, p. 42.
 Roger, O. 1896 A, p. 88.
 Trouessart, E. L. 1898 A, p. 666.
 Wortman, J. L. 1897 B, p. 63.
 Zittel, K. A. 1893 B, p. 507, fig. 421.
 Eocene (Bridger); Wyoming.

ANCHIPPODUS Leidy. Type *A. riparius* Leidy.

- Leidy, J. 1868 I, p. 232.
 Cope, E. D. 1873 E, p. 605.
 1873 G, p. 208.
 1875 J, p. 3.
 1876 A, p. 3.
 1876 C.
 1884 O, p. 195.
 1888 L.
 Flower, W. H. 1876 C, p. 122.

- Flower and Lydekker 1891 A, p. 441.
 Leidy, J. 1871 F, p. 114. (Trogosus, type *T. cas-tori-dens*.)
 1872 B, p. 359. (Trogosus.)
 1873 B, p. 328.
 Lydekker, R. 1887 A, p. 1.
 Marsh, O. C. 1874 B, p. 255.
 1875 B, p. 241.
 1877 E.

Nicholson and Lydekker 1889 A, pp. 1408, 1410.
 Wortman, J. L. 1897 B, p. 61.
 Zittel, K. A. 1893 B, p. 508.

Anchippodus minor (Marsh).

Marsh, O. C. 1871 D, p. 36. (Palæosyops.)
 Cope, E. D. 1873 E, p. 605.
 Flower, W. H. 1876 B, xiii, p. 252.
 King, C. 1878 A, p. 404.
 Leidy, J. 1871 F, p. 114. (Trogosus castoridens.)
 1871 I. (Palæosyops minor.)
 1872 B, p. 360. (Trogosus castoridens.)
 1872 D, p. 37. (A. riparius.)
 1873 B, p. 71, pl. v, figs. 1-3. (Trogosus castoridens); p. 328 (A. riparius).
 Lydekker, R. 1887 A, p. 2. (Syn. of A. riparius.)
 Marsh, O. C. 1873 H, p. 485. (Anchippodus.)
 1876 B, p. 252, pl. ix, fig. 5. (Anchippodus.)
 Matthew, W. D. 1899 A, p. 42.
 Roger, O. 1896 A, p. 88 (Syn. of A. riparius); p. 192 (Palæosyops).
 Trouessart, E. L. 1898 A, p. 666 (A. riparius, in part); p. 738 (Palæosyops minor, in part).
 Wortman, J. L. 1897 B, p. 63. (Tillotherium.)
 Zittel, K. A. 1893 B, p. 508, fig. 422.
 Eocene (Bridger); Wyoming.

Anchippodus riparius Leidy.

Leidy, J. 1868 I, p. 232.
 Conrad, T. A. 1869 A, p. 363.
 Cope, E. D. 1869 N, p. 740.
 Flower, W. H. 1876 B, xiii, p. 514.
 1876 C, p. 120.
 Leidy, J. 1869 A, p. 403, pl. xxx, figs. 45, 46.
 1872 D, p. 37.
 1873 B, pp. 72, 328, in part.
 Lydekker, R. 1887 B, p. 2, in part.
 Matthew, W. D. 1899 A, p. 42.
 Roger, O. 1896 A, p. 88.
 Trouessart, E. L. 1898 A, p. 666.
 Zittel, K. A. 1893 B, p. 508.
 Eocene; New Jersey.

Anchippodus vetulus Leidy.

Leidy, J. 1871 K, p. 229. (Trogosus.)
 1872 B, p. 360. (Trogosus.)
 1873 B, p. 75 (Trogosus); p. 329, pl. vi, fig. 43. (Anchippodus).
 Matthew, W. D. 1899 A, p. 42.
 Roger, O. 1896 A, p. 88.
 Trouessart, E. L. 1898 A, p. 666.
 Eocene (Bridger); Wyoming.

Order GLIRES Linn.

Linnaeus, C., 1758, Syst. Nat., ed. 10, i, p. 56. (Exclusive of Rhinoceros.)

Unless otherwise indicated, the following authors denominate this group *Rodentia*.

Adloff, P. 1898 A. ("Rodentien.")
 Allen, J. A. 1877 A.
 Alston, E. R. 1876 A. (Glires.)
 Baird, S. F. 1857 A, p. 235.
 Brandt, J. F. 1885 A.
 Cope, E. D. 1874 B, p. 474.
 1880 B. 455.
 1881 E.
 1881 J, p. 545.
 1883 S.
 1884 O, pp. 166, 812.
 1887 S, p. 342.
 1888 D, p. 257.
 1888 I.
 1889 C, p. 143.
 1889 R, pp. 875, 876. (Glires.)
 1893 M, p. 1015.
 1898 B, p. 111. (Glires.)
 Cope and Wortman 1884 A, p. 36.
 Coues, E. 1877 B.
 Cuvier, G. 1834 A, viii, pt. i, pp. 1-128, with plates.
 Fleischmann, A. 1888 A.
 Flower, W. H. 1883 A.
 1883 D, p. 415.
 1885 A.
 Flower and Lydekker 1891 A, p. 443.
 Gadow, H. 1898 A, p. 42.
 Gill, T. 1872 A, p. 303. (Glires.)
 1872 B, p. 20. (Glires.)
 Gill and Coues 1877 A, p. 1061.
 Gruber, W. 1859 A. (Glires.)
 Haeckel, E. 1895 A, p. 506.
 Hay, O. P. 1899 F, p. 682. (Glires.)
 Huxley, T. H. 1872 A, p. 369.
 Leidy, J. 1871 C, p. 363.
 Lydekker, R. 1896 B.

Major, Fors. 1893 A, p. 202.
 Marsh, O. C. 1877 E.
 Nicholson and Lydekker 1889 A, p. 1411.
 Osborn, H. F. 1900 C, p. 567.
 Owen, R. 1845 B, p. 398.
 1851 C.
 1866 B, p. 364.
 1868 A, p. 294.
 Palmer, T. S. 1897 A, p. 103.
 Parker, W. K. 1868 A, p. 207.
 1885 A, p. 192.
 Parsons, F. G. 1899 A.
 1900 A.
 Paulli, S. 1900 B, p. 539.
 Roger, O. 1896 A, p. 110.
 Schlosser, M. 1884 A.
 1884 B.
 1888 A.
 1889 A.
 1890 A.
 1890 C.
 1890 D.
 Scott, W. B. 1892 A, p. 426.
 Slade, D. D. 1888 A, p. 243.
 1890 A.
 1892 B.
 Smith J. 1895 A, p. 341.
 Steinmann and Döderlein 1890 A, p. 731.
 Thomas, O. 1896 A, p. 1012.
 Tones, C. S. 1898 A, p. 448.
 Tones, J. 1350 A, p. 529.
 Trouessart, E. L. 1898 A, p. 388.
 Tullberg, T. 1899 A.
 Turner, H. N. 1848 A.
 Weyhe, — 1875 A, p. 111.
 Winge, H. 1888 A, p. 103.
 Woodward, A. S. 1898 B, p. 373.
 Woodward, M. F. 1894 A.
 Wortman, J. L. 1886 A, p. 466.
 Zittel, K. A. 1893 B, pp. 512, 553, 727.

Suborder SIMPLICIDENTATA.

Alston, E. R. 1876 A.
 Flower and Lydekker 1891 A, p. 448.
 Nicholson and Lydekker 1889 A, p. 1413.
 Palmer, T. S. 1897 A.

Schlosser, M. 1884 A, p. 123. (Miodonta.)
 Thomas, O. 1896 A, p. 1015.
 Tullberg, T. 1899 A, pp. 57, 341.
 Woodward, A. S. 1898 B, p. 377.

Superfamily SCIUROMORPHA.

Alston, E. R. 1876 A.
 Brandt, J. F. 1855 A.
 Cope, E. D. 1881 E, p. 361.
 1883 S, p. 43.
 1884 O, p. 812.
 Flower, W. H. 1883 D, p. 417.
 Flower and Lydekker 1891 A, p. 448.
 Gadow, H. 1898 A, p. 42.
 Haeckel, E. 1895 A, p. 509.
 Lydekker, R. 1896 B.
 Nicholson and Lydekker 1889 A, p. 1419.

Palmer, T. S. 1897 A.
 Schlosser, M. 1884 A, p. 98.
 1890 C, p. 250.
 Slade, D. D. 1888 A, p. 243.
 1892 B.
 Roger, O. 1896 A, p. 115.
 Steinmann and Döderlein 1890 A, p. 732.
 Thomas, O. 1896 A, p. 1015.
 Tullberg, T. 1899 A, pp. 283, 461. (Sciuromorphi.)
 Zittel, K. A. 1893 B, p. 521 (Protrogomorpha); p. 527 (Sciuromorpha).

SCIURIDÆ.

Allen, J. A. 1877 A, xi, p. 637.
 Alston, E. R. 1876 A.
 Baird, S. F. 1857 A, p. 240.
 Brandt, J. F. 1855 A.
 Cope, E. D. 1888 I, p. 9.
 1889 C, p. 267.
 1893 M, p. 1015.
 Flower and Lydekker 1891 A, p. 450.
 Leidy, J. 1871 C, p. 363.
 Major, Fors. 1873 A.
 1893 A, p. 186.
 Marsh, O. C. 1877 D, p. 253. (Allomyidæ.)

Nicholson and Lydekker 1889 A, p. 1420.
 Roger, O. 1896 A, p. 115.
 Schlosser, M. 1890 C, p. 250.
 Steinmann and Döderlein 1890 A, p. 733.
 Thomas, O. 1896 A, p. 1015.
 Tones, J. 1850 A, p. 536.
 Trouessart, E. L. 1898 A, p. 395.
 Tullberg, T. 1899 A, pp. 290, 468.
 Winge, H. 1888 A, p. 135. (Including Sciurini, Castorini.)
 Zittel, K. A. 1893 B, p. 528.

PTEROMYINÆ.

Major, Fors. 1893 A, p. 187.
 Marsh, O. C. 1877 D, p. 253. (Allomyidæ.)

Trouessart, E. L. 1898 A, p. 395.
 Winge, H. 1888 A, p. 115. (Allomyini.)

ALLOMYS Marsh. Type *A. nitens* Marsh.

Marsh, O. C. 1877 D, p. 253.
 Cope, E. D. 1879 D, p. 67. (Meniscomys, type *M. hippodus*.)
 1881 E, p. 365. (Meniscomys.)
 1883 S, p. 51. (Meniscomys.)
 1884 O, p. 826. (Meniscomys.)
 1888 B, p. 291 (Meniscomys=Sciurodon, *vide* Schlosser.)
 Hay, O. P. 1899 C, p. 253.
 Major, Fors. 1893 A, p. 192.
 Marsh, O. C. 1877 E.
 Nicholson and Lydekker 1889 A, p. 1421. (Meniscomys.)
 Riggs, E. S. 1899 A, p. 183. (Protogaulus, type *Meniscomys hippodus*.)
 Schlosser, M. 1884 A, p. 136.
 Winge, H. 1888 A, pp. 114, 164.
 Zittel, K. A. 1893 B, p. 529.

Allomys cavatus (Cope).

Cope, E. D. 1881 E, p. 366. (Meniscomys.)
 1881 Q, p. 586. (Meniscomys.)
 1885 S, p. 52, fig. 7. (Meniscomys.)

Cope, E. D. 1884 O, pp. 827, 830, pl. lxiii, figs. 12-15 (Meniscomys.)
 Major, Fors. 1893 A, p. 192.
 Matthew, W. D. 1899 A, p. 62.
 Roger, O. 1896 A, p. 116.
 Trouessart, E. L. 1898 A, p. 396.
 Miocene (John Day); Oregon.

Allomys hippodus (Cope).

Cope, E. D. 1879 D, p. 67. (Meniscomys.)
 1880 C, p. 55. (Meniscomys.)
 1881 E, p. 366. (Meniscomys.)
 1881 Q, p. 586. (Meniscomys.)
 1883 S, p. 52, fig. 6. (Meniscomys.)
 1884 O, pp. 827, 828, pl. lxii, figs. 7-10. (Meniscomys.)
 Hay, O. P. 1899 C, p. 253.
 Matthew, W. D. 1899 A, p. 62.
 Riggs, E. S. 1899 A, p. 183, text figure, p. 185. (Protogaulus.)
 Roger, O. 1896 A, p. 116.
 Trouessart, E. L. 1898 A, p. 396.
 Miocene (John Day); Oregon.

Allomys liolophus (Cope).

- Cope, E. D. 1881 E, p. 366. (Meniscomys.)
 1881 Q, p. 586. (Meniscomys.)
 1883 S, p. 52, fig. 53. (Meniscomys.)
 1884 O, pp. 827, 829, pl. lxiii, fig. 11. (Meniscomys.)
 Matthew, W. D. 1899 A, p. 62.
 Roger, O. 1896 A, p. 116.
 Trouessart, E. L. 1898 A, p. 396.
 Miocene (John Day); Oregon.

Allomys multiplicatus (Cope).

- Cope, E. D. 1879 B, p. 55. (Meniscomys.)
 1879 D, p. 68. (Meniscomys.)
 1883 S, p. 52, fig. 8. (Meniscomys.)
 1884 O, pp. 827, 832. (Syn. of Meniscomys nitens.)
 Matthew, W. D. 1899 A, p. 62.

- Roger, O. 1896 A, p. 116.
 Trouessart, E. L. 1898 A, p. 396.
 Miocene (John Day); Oregon.

Allomys nitens Marsh.

- Marsh, O. C. 1877 D, p. 253.
 Cope, E. D. 1881 E, p. 366. (Meniscomys.)
 1881 Q, p. 586. (Meniscomys.)
 1883 S, p. 52, fig. 8. (Meniscomys.)
 1884 O, pp. 827, 832, pl. lxiii, figs. 16, 17. (Meniscomys.)
 King, C. 1878 A, p. 424.
 Major, Fors. 1893 A, p. 193.
 Matthew, W. D. 1899 A, p. 62.
 Roger, O. 1896 A, p. 116.
 Trouessart, E. L. 1898 A, p. 396.
 Zittel, K. A. 1893 B, p. 529, fig. 440.
 Miocene (John Day); Oregon.

SCIURINÆ.

- Baird, S. F. 1857 A, p. 240.
 Major, Fors. 1893 A.
 Thomas, O. 1896 A, p. 1015.

- Trouessart, E. L. 1898 A, p. 403.
 Winge, H. 1888 A, pp. 109, 190. (<Sciurini.)

SCIURUS¹ Linn. Type *S. vulgaris* Linn.

- Linnaeus, C., 1758, Syst. Nat., ed. 10, i, p. 63.
 Allen, J. A. 1877 A, xi, p. 666.
 Baird, S. F. 1857 A, p. 243.
 Cope, E. D. 1881 E, p. 363.
 1883 S, p. 49.
 1884 O, p. 816.
 Flower and Lydekker 1891 A, p. 450.
 Nicholson and Lydekker 1889 A, p. 1421.
 Owen, R. 1868 A, p. 299.
 Parker, W. K. 1868 A, p. 207, pl. xxv, figs. 12-15.
 Tones, J. 1850 A, p. 535.
 Trouessart, E. L. 1898 A, p. 410.
 Zittel, K. A. 1893 B, p. 329.

Sciurus ballovianus Cope.

- Cope, E. D. 1881 C, p. 177.
 1881 E, p. 363.
 1881 Q.
 1883 S, p. 50, fig. 4, *a-d*.
 1884 O, p. 818, pl. lxiii, figs. 5, 6.
 Matthew, W. D. 1899 A, p. 62.
 Roger, O. 1896 A, p. 117.
 Trouessart, E. L. 1898 A, p. 425.
 Miocene (John Day); Oregon.

Sciurus calycinus Cope.

- Cope, E. D. 1871 I, p. 86.
 Allen, J. A. 1877 A, xi, p. 931.
 Cope, E. D. 1883 S, p. 373.
 1899 A, p. 199.
 Roger, O. 1896 A, p. 117.
 Trouessart, E. L. 1898 A, p. 425.
 Wheatly, C. M. 1871 B.
 Pleistocene; Pennsylvania.

Sciurus panolius Cope.

- Cope, E. D. 1869 E, p. 174, pl. iii, figs. 5, 5a.
 Allen, J. A. 1877 A, xi, p. 932.
 Cope, E. D. 1883 S, p. 373.
 Leidy, J. 1869 A, p. 404.
 Roger, O. 1896 A, p. 117.
 Trouessart, E. L. 1898 A, p. 404.
 Pleistocene; Virginia.

Sciurus relictus Cope.

- Cope, E. D. 1873 CC, p. 3. (Paramys.)
 Allen, J. A. 1877 A, xi, p. 932.
 Cope, E. D. 1869 J, p. 3. (No description.)
 1874 B, p. 475.
 1881 E, p. 363.
 1881 Q.
 1883 S, p. 50, fig. 4, *e, f*.
 1884 O, p. 817, pl. lxv, fig. 35.
 Matthew, W. D. 1899 A, p. 52.
 Roger, O. 1896 A, p. 117.
 Trouessart, E. L. 1898 A, p. 425.
 Oligocene (White River); Colorado.

Sciurus vortmani Cope.

- Cope, E. D. 1879 E, p. 370.
 1881 E, p. 363.
 1881 Q.
 1883 S, p. 50, fig. 4, *g, h*.
 1884 O, p. 816, pl. lxiii, fig. 4.
 Matthew, W. D. 1899 A, pp. 52, 62.
 Trouessart, E. L. 1898 A, p. 155.
 Miocene (John Day); Oregon, Colorado?

¹ Besides the species below recorded, Dr. Leidy has reported (1889 H, p. 5) *S. carolinensis* from a cave in Pennsylvania.

TAMIAS Illiger. Type *Sciurus striatus* Linn.

- Illiger, 1811, Prod. Syst. Mamm., p. 88.
 Allen, J. A. 1877 A, xi, p. 779.
 Baird, S. F. 1857 A, p. 291.
 Flower and Lydekker 1891 A, p. 452.
 Nicholson and Lydekker 1889 A, p. 1421.
 Tomes, J. 1850 A, p. 538.
 Trouessart, E. L. 1898 A, p. 429.
 Winge, H. 1888 A, p. 195.
 Zittel, K. A. 1893 B, p. 530.

Tamias lævidens Cope.

- Cope, E. D. 1869 E, p. 174, pl. iii, fig. 4.
 Allen, J. A. 1877 A, xi, p. 932.
 Cope, E. D. 1883 S, p. 373.
 Leidy, J. 1869 A, p. 404.
 Roger, O. 1896 A, p. 117.
 Trouessart, E. L. 1898 A, p. 433.
 Pleistocene; Virginia.
T. striatus has been reported by Dr. Leidy (1889 H, p. 5.) from a cave in Pennsylvania.

ADJIDAUMO Hay. Type *Gymnoptychus minutus* Cope.

- Hay, O. P. 1899 C, p. 253.
 Cope, E. D. 1874 B, p. 476. (*Gymnoptychus*; not of 1873, the type not the same.)
 1881 E, p. 364. (*Gymnoptychus*.)
 1883 S, p. 50. (*Gymnoptychus*.)
 1884 O, p. 819. (*Gymnoptychus*.)
 1888 B, p. 291. (*Gymnoptychus*.)
 Nicholson and Lydekker 1889 A, p. 1421. (*Gymnoptychus*.)
 Scott, W. B. 1895 E, p. 286. (*Gymnoptychus*.)
 Tullberg, T. 1899 A, p. 480. (*Gymnoptychus*.)
 Zittel, K. A. 1893 B, p. 532. (*Gymnoptychus*.)

Adjidaumo minutus (Cope.)

- Cope, E. D. 1873 T, p. 6. (*Gymnoptychus*.)
 Allen, J. A. 1877 B, p. 945. (*Gymnoptychus minutus*, *G. nasutus*.)
 Cope, E. D. 1873 T, p. 6. (*G. nasutus*.)
 1873 CC, p. 3. (*G. nasutus*, *G. minutus*.)
 1874 B, p. 476. (*G. nasutus*, a syn. of *G. trilophus*.)
 1881 E, p. 364. (*Gymnoptychus*.)
 1881 Q. (*Gymnoptychus*.)

- Cope, E. D. 1883 S, p. 51, fig. 5. (*Gymnoptychus*.)
 1884 O, p. 822, pl. lxxv, figs. 19-30. (*Gymnoptychus*.)
 Hay, O. P. 1899 C, p. 253.
 Matthew, W. D. 1899 A, p. 52. (*Gymnoptychus*.)
 Roger, O. 1896 A, p. 119. (*Gymnoptychus*.)
 Trouessart, E. L. 1898 A, p. 578. (*Gymnoptychus*.)
 Oligocene (White River); Colorado.

Adjidaumo trilophus (Cope.)

- Cope, E. D. 1873 T, p. 6. (*Gymnoptychus*.)
 Allen, J. A. 1877 B, p. 945. (*Gymnoptychus*.)
 Cope, E. D. 1873 CC, p. 3. (*Gymnoptychus*.)
 1874 B, p. 476. (*Gymnoptychus*.)
 1881 E, p. 364. (*Gymnoptychus*.)
 1881 Q. (*Gymnoptychus*.)
 1883 S, p. 51, fig. 5. (*Gymnoptychus*.)
 1884 O, p. 826, pl. lxxv, figs. 31-34. (*Gymnoptychus*.)
 Hay, O. P. 1899 C, p. 253.
 Matthew, W. D. 1899 A, p. 52. (*Gymnoptychus*.)
 Roger, O. 1896 A, p. 120. (*Gymnoptychus*.)
 Oligocene (White River); Colorado.

ARCTOMYS Schreber.

- Schreber, J. C. 1780, Säugeth., iv, p. 721.
 Allen, J. A. 1877 A, xi, p. 909.
 Alston, E. R. 1876 A.
 Baird, S. F. 1857 A, p. 338.
 Blainville, H. M. D. 1864 A, iv, EE, p. 11, plate.
 Cope, E. D. 1869 E, p. 172. (*Stereodectes*, type *S. tortus*.)
 1869 J, p. 3. (*Stereodectes*.)
 Flower and Lydekker 1891 A, p. 454.
 Giebel, C. G. 1859 A.
 Nicholson and Lydekker 1889 A, p. 1420.
 Owen, R. 1866 B, p. 382.
 Palmer, T. S. 1897 A.
 Parker, W. K. 1868 A, p. 207, pl. xxiv, figs. 14-16.
 Tomes, J. 1850 A, p. 538.
 Zittel, K. A. 1893 B, p. 529.

Arctomys monax (Linn.)

- Linnaeus, C., 1758, Syst. Nat., ed. 10, i, p. 60. (Mus.)
 Allen, J. A. 1877 A, xi, p. 911.
 Baird, S. F. 1857 A, p. 333, pl. xlix, fig. 1.
 Cope, E. D. 1869 E, p. 173.
 1883 S, p. 373.
 Flower and Lydekker 1891 A, p. 450, fig. 198.
 Giebel, C. G. 1859 A.

Type not designated.

- Leidy, J. 1862 A, p. 423.
 1869 A, p. 404.
 1889 H, p. 5.
 Trouessart, E. L. 1898 A, p. 445.
 Zittel, K. A. 1893 B, p. 529, fig. 439.
 Recent; United States to Hudson Bay: Pleistocene; Illinois, Virginia.

Arctomys tortus (Cope.)

- Cope, E. D. 1869 E, p. 172, pl. iii, figs. 3, 3a. (*Stereodectes*.)
 1869 J. (*Stereodectes*.)
 Leidy, J. 1869 A, pp. 404, 446.
 Trouessart, E. L. 1898 A, p. 445. (*A. monax*.)
 Pleistocene; Virginia.

Arctomys vetus Marsh.

- Marsh, O. C. 1871 E, p. 121.
 Allen, J. A. 1877 A, xi, p. 933.
 King, C. 1878 A, p. 430.
 Matthew, W. D. 1899 A, p. 66.
 Roger, O. 1896 A, p. 116.
 Trouessart, E. L. 1898 A, p. 445.
 Miocene (Loup Fork); Nebraska.

MYLAGAULIDÆ.

Cope, E. D. 1881 Q, p. 586.
1881 E, p. 373.

Matthew, W. D. 1899 A, p. 66.
Riggs, E. S. 1899 A, p. 181.

MYLAGAULUS Cope. Type *M. sesquipedalis* Cope.

Cope, E. D. 1878 H, p. 384.
1881 E, p. 373.
1883 S, p. 56.

Nicholson and Lydekker 1889 A, p. 1415.
Riggs, E. S. 1899 A, p. 181.
Zittel, K. A. 1893 B, p. 531.

Mylagaulus monodon Cope.

Cope, E. D. 1881 E, p. 374.
1881 Q, p. 586.
1883 S, p. 56, fig. 12.

Matthew, W. D. 1899 A, p. 66.
Riggs, E. S. 1899 A, p. 184.

Roger, O. 1896 A, p. 119.

Trouessart, E. L. 1898 A, p. 448.

Miocene (Loup Fork); Nebraska, Colorado.

Mylagaulus sesquipedalis Cope.

Cope, E. D. 1878 H, p. 384.

1881 E, p. 375.

1881 Q, p. 586.

1883 S, p. 56, fig. 12.

Matthew, W. D. 1899 A, p. 66.

Roger, O. 1896 A, p. 119.

Trouessart, E. L. 1898 A, p. 448.

Miocene (Loup Fork); Nebraska.

MESOGAULUS Riggs. Type *M. ballensis* Riggs.

Riggs, E. S. 1899 A, p. 181.

Mesogaulus ballensis Riggs.

Riggs, E. S. 1899 A, p. 181, text figures.

Miocene (Deep River); Montana.

CASTORIDÆ.

Allen, J. A. 1877 A, p. 431.
Alston, E. R. 1876 A, p. 78.
Baird, S. F. 1857 A, p. 350. (Castorinæ.)
Brandt, J. F. 1855 A.
Flower and Lydekker 1891 A, p. 457.
Leidy, J. 1871 C, p. 363.
Merriam, J. C. 1896 A, p. 364.
Nicholson and Lydekker 1889 A, p. 1419.

Roger, O. 1896 A, p. 118.

Steinmann and Döderlein 1890 A, p. 733.

Thomas, O. 1896 A, p. 1015.

Trouessart, E. L. 1898 A, p. 447.

Tullberg, T. 1899 A, pp. 306, 472.

Winge, H. 1888 A, p. 137. (Castorini.)

Zittel, K. A. 1893 B, p. 528.

CASTOR Linn. Type *C. fiber* Linn.

Linnaeus, C., 1858, Syst. Nat., ed. 10, i, p. 58.
Allen, J. A. 1877 A, p. 432.
Baird, S. F. 1857 A, p. 355.
Blainville, H. M. D. 1864 A, iv, EE, p. 13, pls. i, ii.
Brandt, J. F. 1855 A.
Cope, E. D. 1881 E, p. 368.
1884 O, p. 838.
1888 I, p. 10.
Flower, W. H. 1885 A.
Flower and Lydekker 1891 A, p. 457.
Nicholson and Lydekker 1889 A, p. 1419.
Owen, R. 1866 B, pp. 364, 374, figs. 230, 240.
Pictet, F. J. 1853 A, p. 250.
Tomes, J. 1850 A, p. 739.
Trouessart, E. L. 1898 A, p. 447.
Wyman, J. 1850 D.
Zittel, K. A. 1893 B, p. 531.

Castor canadensis Kuhl.

Kuhl, H., 1820, Beiträge zur Zool., p. 64.
Allen, J. A. 1877 A, p. 433. (C. fiber.)
Baird, S. F. 1857 A, p. 355, pl. xlviii, fig. 1.

Brandt, J. F. 1855 A, p. 64, pls. i-iii. (C. americanus.)

Cope, E. D. 1869 E, p. 173. (C. fiber.)

1878 H, p. 389. (C. fiber.)

1881 E, p. 370. (C. fiber.)

1884 O, p. 839. (C. fiber.)

1889 F, p. 160. (C. fiber.)

1889 S, p. 980. (C. fiber.)

1899 A, p. 200. (C. fiber.)

Leidy, J. 1860 B, p. 111, pl. xxi, figs. 1, 2.

1869 A, p. 405.

1889 H, p. 5, pl. i, fig. 8. (C. fiber.)

Logan, W. E. 1863 A, p. 914.

Lydekker, R. 1885 B, p. 263.

Roger, O. 1896 A, p. 119.

Trouessart, E. L. 1898 A, p. 447.

Wyman, J. 1850 A, p. 61, fig. 4. (C. fiber americanus.)

Recent; North America. Pleistocene; New York, Pennsylvania, Virginia, Tennessee, New Jersey, South Carolina, Oregon, Ontario, Canada.

EUCASTOR Leidy. Type *E. tortus* Leidy.

- Leidy, J.* 1858 E, p. 23. (Subgenus of Castor.)
Allen, J. A. 1877 A, p. 449.
Cope, E. D. 1881 E, p. 369.
 1883 S, p. 55.
 1884 O, p. 839.
Flower and Lydekker 1891 A, p. 458.
Nicholson and Lydekker 1889 A, p. 1419.
Zittel, K. A. 1893 B, p. 531.

Eucastor tortus Leidy.

- Leidy, J.* 1858 E, p. 23. [Castor (Eucastor).]
Allen, J. A. 1877 A, p. 449.

- Cope, E. D.* 1881 E, p. 369.
 1881 Q, p. 586.
 1883 S, p. 55.
Hayden, F. V. 1858 B, p. 158.
Leidy, J. 1869 A, pp. 341, 405, pl. xxvi, figs. 21, 22.
 (Castor.)
 1871 C, p. 363. (Castor.)
Matthew, W. D. 1899 A, p. 66.
Merriam, J. C. 1896 A.
Roger, O. 1896 A, p. 119.
Trouessart, E. L. 1898 A, p. 448.
 Miocene (Loup Fork); Nebraska.

STENEOFIBER E. Geoffroy. Type not indicated.

- Geoffroy, E.* 1833, Revue Encyclop.
Cope, E. D. 1877 K, p. 297.
 1881 E, p. 369.
 1884 O, p. 838. (Syn. of Castor.)
Flower and Lydekker 1891 A, p. 458. (Chalicomys, Palæocastor.)
Leidy, J. 1869 A, p. 306. (Palæocastor, type *Steneofiber nebrascensis*.)
 1871 C, p. 363. (Palæocastor.)
Nicholson and Lydekker 1889 A, p. 1420. (Chalicomys, Palæocastor.)
Pictet, F. J. 1853 A, p. 252.
Pomel, A. 1847 C, p. 381.
 1853 A, p. 20.
Schlosser, M. 1884 A, p. 21.
Scott, W. B. 1895 C, p. 76.
Tullberg, T. 1899 A, p. 474.
Zittel, K. A. 1893 B, p. 530.

Steneofiber gradatus Cope.

- Cope, E. D.* 1879 D, p. 63.
 1879 B, p. 55.
 1881 E, p. 370. (Castor.)
 1881 Q, p. 586. (Castor.)
 1883 S, p. 55. (Castor.)
 1884 O, pp. 839, 844, pl. lxiii, fig. 22. (Castor.)
Matthew, W. D. 1899 A, p. 62.
Roger, O. 1896 A, p. 118.
Trouessart, E. L. 1898 A, p. 449.
 Miocene (John Day); Oregon.

Steneofiber montanus Scott.

- Scott, W. B.* 1893 B, p. 680.
Matthew, W. D. 1899 A, p. 52.
Roger, O. 1896 A, p. 119.
Scott, W. B. 1895 C, p. 76.
Trouessart, E. L. 1898 A, p. 450.
 Oligocene (White River); Montana.

Steneofiber nebrascensis Leidy.

- Leidy, J.* 1856 I, p. 89.
Allen, J. A. 1877 A, p. 451.

- Cope, E. D.* 1877 K, pp. 297, 300.
 1881 E, p. 370. (Castor.)
 1881 Q, p. 586. (Castor.)
 1883 S, p. 55. (Castor.)
 1884 O, p. 839. (Castor.)
Hayden, F. V. 1858 B, p. 158.
King, C. 1878 A, p. 412. (Palæocastor.)
Leidy, J. 1857 D, p. 176. (Chalicomys.)
 1869 A, pp. 338, 406, pl. xxvi, figs. 7-11. (Palæocastor.)
 1871 C, p. 363. (Palæocastor.)
Matthew, W. D. 1899 A, p. 52.
Roger, O. 1896 A, p. 118.
Trouessart, E. L. 1898 A, p. 449.
 Oligocene (White River); South Dakota, Nebraska, North Dakota.

Steneofiber pansus Cope.

- Cope, E. D.* 1874 J, p. 222.
Allen, J. A. 1877 A, p. 453.
Cope, E. D. 1875 F, p. 73.
 1877 K, p. 297, pl. lxxix, figs. 4-14.
 1881 E, p. 370.
 1881 K. (Castor.)
 1883 S, p. 55, fig. 11. (Castor.)
 1884 O, pp. 839, 840. (Castor.)
Matthew, W. D. 1899 A, p. 66.
Roger, O. 1896 A, p. 118.
Trouessart, E. L. 1898 A, p. 449.
 Miocene (Loup Fork); New Mexico, Nebraska.

Steneofiber peninsulatus (Cope).

- Cope, E. D.* 1881 E, p. 370. (Castor.)
 1879 B, p. 55. (Steneofiber nebrascensis?).
 1881 Q, p. 586. (Castor.)
 1883 S, p. 55, figs. 9, 10. (Castor.)
 1884 O, p. 840, pl. lxiii, figs. 18-21. (Castor.)
Matthew, W. D. 1899 A, p. 62.
Roger, O. 1896 A, p. 118.
Trouessart, E. L. 1898 A, p. 449.
 Miocene (John Day); Oregon.

SIGMOGOMPHIUS Merriam. Type *S. lecontei* Merriam.

- Merriam, J. C.* 1896 A.

Sigmogomphius lecontei Merriam.

- Merriam, J. C.* 1896 A, figs. 1, 2.

- Matthew, W. D.* 1899 A, p. 66.
Trouessart, E. L. 1898 A, p. 450.
 Pliocene; California.

ISCHYROMYIDÆ.

- Alston, E. R. 1876 A, p. 78.
 Allen, J. A. 1877 B, p. 944.
 Cope, E. D. 1881 E, p. 368.
 1884 O, pp. 37, 834 (Protomyidæ); p. 835
 (Ischyromyidæ).
 Nicholson and Lydekker 1889 A, p. 1420.

- Roger, O. 1896 A, p. 110.
 Trouessart, E. L. 1898 A, p. 451.
 Tullberg, T. 1899 A, p. 463.
 Winge, H. 1888 A, p. 114.
 Zittel, K. A. 1893 B, p. 521.

PARAMYS Leidy. Based on three species, *P. delicatus*, *delicator*, *delicatissimus*.

Leidy, J. 1871 L, p. 231.

As the species here included in *Paramys* have, by Cope and others, been referred to the genus *Plesiartomys*, citations are given to the literature of the latter genus also.

Allen, J. A. 1877 A, xi, p. 933 (Paramys); p. 935 (Sciuravus).

1877 B, p. 946. (Pseudotomus.)

Alston, E. R. 1876 A, p. 78. (Pseudotomus.)

Cope, E. D. 1872 N, p. 467. (Pseudotomus, type *P. hians*.)

1873 E, p. 610. (Pseudotomus.)

1877 K, p. 170. (Plesiartomys.)

1883 S, p. 45. (Plesiartomys.)

1884 O, p. 175. (Plesiartomys.)

Flower and Lydekker 1891 A, p. 457. (Plesiartomys.)

Leidy, J. 1871 L, p. 230 (Sciuravus); p. 231 (Paramys).

1872 B, p. 357.

1873 B, pp. 109, 335 (Paramys); p. 113 (Sciuravus).

Major, Fors. 1893 A, p. 202. (Plesiartomys.)

Marsh, O. C. 1871 E, p. 122. (Sciuravus, type *S. nitidus*.)

1878 G, p. 246. (Sciuravus.)

Matthew, W. D. 1897 C, p. 266. (Plesiartomys.)

Nicholson and Lydekker 1889 A, p. 1420. (Plesiartomys, Paramys.)

Osborn, H. F. 1895 A, p. 81.

Osborn, Scott, and Speir 1878 A, p. 83.

Scott, W. B. 1890 A, p. 474. (Plesiartomys.)

1892 A, p. 426.

Trouessart, E. L. 1898 A, p. 451.

Winge, H. 1888 A, pp. 114, 164.

Zittel, K. A. 1893 B, p. 521 (Paramys); p. 528 (Plesiartomys.)

Paramys buccatus (Cope).

Cope, E. D. 1877 K, p. 171, pl. lxiv, fig. 8. (Plesiartomys.)

1881 D, p. 184. (Plesiartomys.)

1882 E, p. 146. (Plesiartomys.)

1883 S, p. 47. (Plesiartomys.)

1884 O, p. 179, pl. xlii, fig. 14. (Plesiartomys.)

Matthew, W. D. 1899 A, p. 30, 39.

Roger, O. 1896 A, p. 110.

Trouessart, E. L. 1898 A, p. 451.

Eocene (Wasatch); New Mexico, Wyoming; (Bridger); Wyoming.

Paramys delicatior Leidy.

Leidy, J. 1871 L, p. 231.

Allen, J. A. 1877 A, xi, p. 934.

Cope, E. D. 1873 E, p. 610.

1873 U, p. 4.

1877 K, p. 172, pl. xlii, figs. 10, 11. (Plesiartomys.)

1881 D, p. 184. (Plesiartomys.)

1882 E, p. 146. (Plesiartomys.)

1883 S, p. 47. (Plesiartomys.)

1884 O, p. 182, pl. xxiv, figs. 11-13. (Plesiartomys.)

Leidy, J. 1872 B, p. 357.

1873 B, pp. 110, 335, pl. vi, figs. 26, 27; pl. xxvii, figs. 16-18.

Matthew, W. D. 1899 A, pp. 30, 35, 38.

Osborn, H. F. 1897 G, p. 256. (Plesiartomys delicatior?).

Roger, O. 1896 A, p. 110.

Trouessart, E. L. 1898 A, p. 451.

Eocene (Wind River, Bridger); Wyoming (Wasatch); New Mexico, Wyoming.

Paramys delicatissimus Leidy.

Leidy, J. 1871 L, p. 231.

Allen, J. A. 1877 A, xi, p. 935.

Cope, E. D. 1873 E, p. 610.

1873 U, p. 4.

1877 K, p. 172, pl. xxiv, figs. 9, 12. (Plesiartomys.)

1881 D, p. 184. (Plesiartomys.)

1883 S, p. 47, figs. 1, 2. (Plesiartomys.)

1884 O, p. 179, pl. xxiv, figs. 1-10. (Plesiartomys.)

Leidy, J. 1872 B, p. 357.

1873 B, pp. 111, 335, pl. vi, figs. 28, 29.

Matthew, W. D. 1899 A, pp. 30, 34, 39.

Roger, O. 1896 A, p. 110.

Trouessart, E. L. 1898 A, p. 451.

Zittel, K. A. 1893 B, p. 522, fig. 430.

Eocene (Bridger); Wyoming; (Wasatch?);

New Mexico, Wyoming.

Paramys delicatus Leidy.

Leidy, J. 1871 L, p. 231.

Allen, J. A. 1877 A, xi, p. 934.

Cope, E. D. 1873 E, p. 610.

1873 U, p. 4.

King, C. 1878 A, p. 404.

Leidy, J. 1872 B, p. 357.

1873 B, pp. 110, 335, pl. vi, figs. 23-25.

Matthew, W. D. 1899 A, p. 38.

Roger, O. 1896 A, p. 110.

Trouessart, E. L. 1898 A, p. 451.

Eocene (Bridger); Wyoming.

Paramys hians (Cope.)

Cope, E. D. 1872 N, p. 467. (Pseudotomus.)

Allen, J. A. 1877 B, p. 946. (Pseudotomus.)

- Cope, E. D. 1873 E, p. 611. (Pseudotomus.)
 1883 S, p. 47. (Plesiartomys.)
 1884 O, p. 183, pl. xxiv, figs. 3-5. (Plesiartomys.)
 Matthew, W. D. 1899 A, p. 39.
 Roger, O. 1896 A, p. 110.
 Trouessart, E. L. 1898 A, p. 451.
 Eocene (Bridger); Wyoming.

Paramys leptodus Cope.

- Cope, E. D. 1873 U, p. 3.
 Allen, J. A. 1877 A, xi, p. 934.
 Cope, E. D. 1873 E, p. 609.
 1883 S, p. 47. (Plesiartomys.)
 1884 O, p. 183, pl. xxiv, fig. 1. (Plesiartomys.)
 Matthew, W. D. 1899 A, p. 39.
 Roger, O. 1896 A, p. 111.
 Trouessart, E. L. 1898 A, p. 451.
 Eocene (Bridger); Wyoming.

Paramys nitidus (Marsh.)

- Marsh, O. C. 1871 E, p. 122. (Sciuravus.)
 Allen, J. A. 1877 A, xi, p. 935.
 King, C. 1878 A, p. 404.
 Leidy, J. 1872 B, p. 358. (Sciuravus.)
 1873 B, p. 113. (Sciuravus.)
 Matthew, W. D. 1899 A, p. 39.
 Roger, O. 1896 A, p. 111.
 Trouessart, E. L. 1898 A, p. 451.
 Eocene (Bridger); Wyoming.

Paramys parvidens (Marsh.)

- Marsh, O. C. 1872 I, p. 220. (Sciuravus.)
 Allen, J. A. 1877 A, xi, p. 936. (Sciuravus.)
 Matthew, W. D. 1899 A, p. 39.
 Roger, O. 1896 A, p. 111.
 Trouessart, E. L. 1898 A, p. 451.
 Eocene (Bridger); Wyoming.

Paramys robustus Marsh.

- Marsh, O. C. 1872 I, p. 218.
 Allen, J. A. 1877 A, xi, p. 934.
 Matthew, W. D. 1899 A, p. 39.
 Osborn, H. F. 1895 A, p. 81.

TILLOMYS Marsh. Type *T. senex* Marsh.

- Marsh, O. C. 1872 I, p. 219.
 Allen, J. A. 1877 A, xi, p. 938.
 Nicholson and Lydekker 1889 A, p. 1420.
 (= ? Ischyromys.)
 Schlosser, M. 1884 A, p. 130. (= ? Ischyromys.)
 Zittel, K. A. 1893 B, p. 522.

Tillomys parvus Marsh.

- Marsh, O. C. 1872 I, p. 219.
 Allen, J. A. 1877 A, xi, p. 939.
 Matthew, W. D. 1899 A, p. 39.
 Roger, O. 1896 A, p. 111.

TAXYMYs Marsh. Type *T. lucaris* Marsh.

- Marsh, O. C. 1872 I, p. 219.
 Allen, J. A. 1877 A, xi, p. 938.
 Marsh, O. C. 1880 H, p. 10. (Tachymys.)
 Zittel, K. A. 1893 B, p. 522. (Toxymys.)

Taxymys lucaris Marsh.

- Marsh, O. C. 1872 I, p. 219.

- Roger, O. 1896 A, p. 111.
 Trouessart, E. L. 1898 A, p. 451.
 Eocene (Bridger); Wyoming.

Paramys sciuroides (Scott and Osb.).

- Scott and Osborn 1887 A, p. 256. (Plesiartomys.)
 Major, Fors. 1893 A, p. 202. (Plesiartomys.)
 Matthew, W. D. 1899 A, p. 49.
 Scott and Osborn 1890 A, p. 475, pl. xi, figs. 1, 2;
 text fig. 1. (Plesiartomys.)
 Roger, O. 1896 A, p. 111.
 Trouessart, E. L. 1898 A, p. 451.
 Zittel, K. A. 1893 B, p. 522, fig. 429.
 Eocene (Uinta); Utah.

Paramys superbus Osb., Scott, and Speir.

- Osborn, Scott, and Speir 1878 A, p. 84.
 Eocene (Bridger); Wyoming.

Paramys uintensis Osborn.

- Osborn, H. F. 1895 A, p. 81.
 Matthew, W. D. 1899 A, p. 49.
 Roger, O. 1896 A, p. 111.
 Trouessart, E. L. 1898 A, p. 451.
 Eocene (Uinta); Utah.

Paramys undans (Marsh.)

- Marsh, O. C. 1871 E, p. 122. (Sciuravus.)
 Allen, J. A. 1877 A, xi, p. 965. (Sciuravus.)
 Cope, E. D. 1873 E, p. 610.
 1873 U, p. 4.
 1883 S, p. 47. (Plesiartomys.)
 Leidy, J. 1872 B, p. 358. (Sciuravus.)
 1873 B, p. 113. (Sciuravus.)
 Matthew, W. D. 1899 A, p. 39.
 Roger, O. 1896 A, p. 111.
 Trouessart, E. L. 1898 A, p. 451.
 Eocene (Bridger); Wyoming.

Paramys sp. indet.

- Leidy, J. 1873 B, pp. 113, 335, pl. vi, fig. 30.
 (Sciuravus.)
 Allen, J. A. 1877 A, xi, p. 936.
 Eocene (Bridger); Wyoming.

- Trouessart, E. L. 1898 A, p. 451.
 Eocene (Bridger); Wyoming

Tillomys senex Marsh.

- Marsh, O. C. 1872 I, p. 219.
 Allen, J. A. 1877 A, xi, p. 938.
 King, C. 1878 A, p. 404.
 Matthew, W. D. 1899 A, p. 39.
 Roger, O. 1896 A, p. 111.
 Trouessart, E. L. 1898 A, p. 451.
 Eocene (Bridger); Wyoming

- Allen, J. A. 1877 A, xi, p. 938.
 King, C. 1878 A, p. 404.
 Matthew, W. D. 1899 A, p. 39.
 Roger, O. 1896 A, p. 111.
 Trouessart, E. L. 1898 A, p. 452.
 Eocene (Bridger); Wyoming.

COLONYMYS Marsh. Type *C. celer* Marsh.

- Marsh, O. C. 1872 I, p. 220.
 Allen, J. A. 1877 A, xi, p. 938.
 Marsh, O. C. 1878 G, p. 246.
 Matthew, W. D. 1899 A, p. 39. (Colonomys.)
 Nicholson and Lydekker 1889 A, p. 1419.
 Zittel, K. A. 1893 B, p. 522.

Colonymys celer Marsh.

- Marsh, O. C. 1872 I, p. 220.
 Allen, J. A. 1877 A, xi, p. 938.
 Matthew, W. D. 1899 A, p. 39.
 Roger, O. 1896 A, p. 111.
 Trouessart, E. L. 1898 A, p. 452.
 Eocene (Green River); Wyoming.

APATEMYS Marsh. Type *A. bellus* Marsh.

- Marsh, O. C. 1872 I, p. 221.
 1877 E.
 A genus of uncertain position.

Apatemys bellulus Marsh.

- Marsh, O. C. 1872 I, p. 221.
 Matthew, W. D. 1899 A, p. 39.
 Roger, O. 1896 A, p. 89.
 Trouessart, E. L. 1898 A, p. 669.
 Eocene (Bridger); Wyoming.

Apatemys bellus Marsh.

- Marsh, O. C. 1872 I, p. 221.
 King, C. 1878 A, p. 404.
 Matthew, W. D. 1899 A, p. 39.
 Roger, O. 1896 A, p. 89.
 Trouessart, E. L. 1898 A, p. 669.
 Eocene (Bridger); Wyoming.

ISCHYROMYS Leidy. Type *I. typus* Leidy.

- Leidy, J. 1856 I, p. 89.
 Allen, J. A. 1877 B, p. 944 (Ischyromys); p. 945 (Gymnoptychus).
 Cope, E. D. 1873 S, p. 1. (Colotaxis, type *C. cristatus*=*I. typus*.)
 1873 T, p. 5. (Gymnoptychus, type *G. chrysodon*=*I. typus*.)
 1874 B, p. 477.
 1881 E, p. 366.
 1883 S, p. 47.
 1884 O, p. 833.
 1888 B, p. 291. (=Sciurumys, *vide* Schlosser.)
 Hay, O. P. 1899 C, p. 253.
 Leidy, J. 1871 C, p. 563.
 Nicholson and Lydekker 1889 A, p. 1420.
 Schlosser, M. 1884 A, p. 130.
 Trouessart, E. L. 1898 A, p. 452.
 Tullberg, T. 1899 A, p. 464.
 Winge, H. 1888 A, pp. 115, 164.
 Zittel, K. A. 1893 B, p. 522.

Ischyromys typus Leidy.

- Leidy, J. 1856 I, p. 89.
 Allen, J. A. 1877 A, xi, p. 931. (Gymnoptychus chrysodon.)

- Allen, J. A. 1877 B, p. 944 (*I. typus*); p. 945 (Gymnoptychus chrysodon); p. 948 (Colotaxis cristatus).
 Cope, E. D. 1873 S, p. 1. (Colotaxis cristatus.)
 1873 T, p. 5. (Gymnoptychus chrysodon.)
 1873 CC, p. 3. (Colotaxis cristatus.)
 1874 B, p. 477.
 1881 Q.
 1883 S, p. 47, fig. 3.
 1884 O, p. 835, pl. lxvii, figs. 1-12.
 1888 I, p. 8, fig. 5.
 1889 C, p. 267, fig. 88.
 Hay, O. P. 1899 C, p. 253.
 Hayden, F. V. 1858 B, p. 158.
 King, C. 1878 A, p. 412.
 Leidy, J. 1869 A, pp. 335, 405, pl. xxvi, figs. 1-6.
 1871 C, p. 363.
 Matthew, W. D. 1899 A, p. 52.
 Roger, O. 1896 A, p. 111.
 Schlosser, M. 1884 A, p. 136.
 Trouessart, E. L. 1898 A, p. 452.
 Tullberg, T. 1899 A, p. 463.
 Zittel, K. A. 1893 B, p. 522, fig. 431.
 Oligocene (White River); South Dakota, Nebraska, Colorado.

MYSOPS Leidy. Type *M. minimus* Leidy.

- Leidy, J. 1871 L, p. 232.
 Allen, J. A. 1877 A, xi, p. 936.
 Cope, E. D. 1883 S, p. 47. (Syllophodus; no type indicated.)
 1884 O, p. 846. (Syllophodus.)
 Flower and Lydekker 1891 A, p. 484.
 Leidy, J. 1873 B, p. 111.
 Nicholson and Lydekker 1889 A, p. 1416 (Syllophodus); p. 1420 (Mysops).
 Zittel, K. A. 1893 B, p. 523.

Mysops fraternus Leidy.

- Leidy, J. 1873 B, pp. 112, 336, pl. xxvii, figs. 14, 15.
 Allen, J. A. 1877 A, xi, p. 937.
 Cope, E. D. 1883 S, p. 47. (Syllophodus.)
 Matthew, W. D. 1899 A, p. 39.

- Roger, O. 1896 A, p. 111.
 Trouessart, E. L. 1898 A, p. 452.
 Eocene (Bridger); Wyoming.

Mysops minimus Leidy.

- Leidy, J. 1871 L, p. 232.
 Allen, J. A. 1877 A, p. 937. (*M. minutus*.)
 Cope, E. D. 1883 S, p. 47. (Syllophodus.)
 King, C. 1878 A, p. 404.
 Leidy, J. 1872 B, p. 357.
 1873 B, pp. 111, 336, pl. vi, figs. 31, 32.
 Matthew W. D. 1899 A, p. 39.
 Roger, O. 1896 A, p. 111.
 Trouessart, E. L. 1898 A, p. 452.
 Eocene (Bridger); Wyoming.

*Superfamily MYOMORPHA Brandt.**Brandt, J. F.* 1855 A.

Alston, E. R. 1876 A.

Cope, E. D. 1881 E, p. 361.

1883 S, p. 43.

1884 O, p. 812.

1889 P, p. 659.

Flower and Lydekker 1891 A, p. 459.

Gadow, H. 1898 A, p. 43.

Haeckel, E. 1895 A, p. 510.

Lydekker, R. 1896 B.

Nicholson and Lydekker 1889 A, p. 1416.

Roger, O. 1896 A, p. 120.

Schlosser, M. 1884 A, p. 98.

Slade, D. D. 1888 A.

1892 B.

Thomas, O. 1896 A, p. 1016.

Trouessart, E. L. 1898 A, p. 453.

Tullberg, T. 1899 A, pp. 151, 386. (Myomorphi.)

Zittel, K. A. 1893 B, p. 533.

MURIDÆ.

Adloff, P. 1898 A. ("Muriden.")

Alston, E. R. 1876 A, p. 80.

Baird, S. F. 1857 A, p. 427.

Burmeister, H. 1879 B, p. 197. (Murini.)

Coues, E. 1877 B, i, p. 1.

Flower, W. H. 1883 D, p. 418.

Flower and Lydekker 1891 A, p. 461.

Nicholson and Lydekker 1889 A, p. 1416.

Parker, W. K. 1868 A, p. 207.

Thomas, O. 1896 A, p. 1017.

Tomes, J. 1850 A, p. 542.

Trouessart, E. L. 1898 A, p. 458.

Tullberg, T. 1899 A, pp. 242, 432 (Hesperomyidæ;

pp. 251, 445 (Muridæ).)

Winge, H. 1888 A, p. 123.

Zittel, K. A. 1893 B, p. 537.

CRICETINÆ.

Baird, S. F. 1857 A, p. 445. (Sigmodontes.)

Coues, E. 1877 B, i, p. 7. (Sigmodontes, in part.)

Flower and Lydekker 1891 A, p. 463.

Merriam, C. H. 1894 A, p. 226.

Nehring, A. 1893 A. (Genus *Cricetus*.)

Palmer, T. S. 1897 A.

Roger, O. 1896 A, p. 120. (Cricetidæ.)

Thomas, O. 1888 B, p. 132. (Criceti.)

1896 A, p. 1019. (Sigmodontinæ.)

Trouessart, E. L. 1898 A, pp. 505, 511.

Tullberg, T. 1899 A, pp. 219, 430.

Zittel, K. A. 1893 B, p. 534. (Cricetidæ.)

EUMYS Leidy. Type *E. elegans* Leidy.*Leidy, J.* 1856 I, p. 90.

Cope, E. D. 1874 B, p. 474.

1877 K, p. 300.

1881 E, p. 376.

1883 S, p. 165.

1884 O, p. 848.

Leidy, J. 1871 C, p. 364.

Lydekker, R. 1887 A, p. 322.

Nicholson and Lydekker 1889 A, p. 1418.

Zittel, K. A. 1893 B, p. 535.

Eumys elegans Leidy.*Leidy, J.* 1856 I, p. 90.

Allen, J. A. 1877 B, p. 946.

Cope, E. D. 1874 B, p. 474.

Cope, E. D. 1881 E, p. 376.

1881 Q.

1883 S, p. 165, figs. 13, 14.

1884 O, p. 849, pl. lxxv, figs. 1-14.

Hayden, F. V. 1858 B, p. 158.

King, C. 1878 A, p. 412.

Leidy, J. 1869 A, pp. 342, 407, pl. xxvi, figs. 12, 13.

1871 C, p. 364.

Lydekker, R. 1887 A, p. 322.

Matthew, W. D. 1899 A, p. 53.

Roger, O. 1896 A, p. 121.

Trouessart, E. L. 1898 A, p. 511.

Zittel, K. A. 1893 B, p. 535, fig. 448.

Oligocene (White River); South Dakota,
Colorado, Nebraska.PEROMYSCUS Gloger. Type *P. arboreus* Gloger.Unless otherwise indicated the following authorities call this genus *Hesperomys*.

Alston, E. R. 1876 A, p. 84.

Baird, S. F. 1857 A, p. 453.

Burmeister, H. 1879 B, p. 205.

Cope, E. D. 1881 E, p. 376.

1884 O, p. 852.

Coues, E. 1877 B, i, p. 43 (Hesperomys); p. 45 (Subg. *Vesperimus*).

Flower and Lydekker 1891 A, p. 463. (Cricetus.)

Lydekker, R. 1885 B, p. 229.

Nicholson and Lydekker 1889 A, p. 1418.

Parker, W. K. 1868 A, p. 207, pl. xxv, figs. 6, 7. (Cricetus.)

Thomas, O. 1888 B, p. 133. (Cricetus.)

1896 A, p. 1019.

Zittel, K. A. 1893 B, p. 535.

Peromyscus leucopus (Raf.).

Baird, S. F. 1857 A, p. 459. (Hesperomys.)

Cope, E. D. 1869 E, p. 173. (Hesperomys.)

1871 I, p. 87. (Hesperomys.)

1881 E, p. 377. (Hesperomys.)

1899 A, p. 201. (Hesperomys leucopus?)

Coues, E. 1877 B, i, p. 50, pl. iii, figs. 18-21. [Hesperomys (*Vesperimus*).]

Leidy, J. 1889 H, p. 6. (Hesperomys.)

Roger, O. 1896 A, p. 122. (Vesperomys.)

Trouessart, E. L. 1898 A, p. 512.

Wheatley, C. M. 1871 B. (Hesperomys.)

Zittel, K. A. 1893 B, p. 535. (Vesperomys leucopus fossilis.)

Recent; eastern United States from Carolinas to New York. Pleistocene?; caves of Virginia and Pennsylvania, with doubts as to identifications.

Peromyscus loxodon (Cope).

Cope, E. D. 1874 I, p. 148. (Hesperomys.)

Allen, J. A. 1877 B, p. 946. (Eumys.)

Cope, E. D. 1874 O, p. 17. (Hesperomys.)

1875 F, p. 73. (Eumys.)

1877 K, p. 300, pl. lxxix, fig. 15. (Eumys.)

1881 E, p. 376. (Hesperomys.)

1881 Q. (Hesperomys.)

Cope, E. D. 1883 S, p. 165. (Hesperomys.)

Matthew, W. D. 1899 A, p. 66.

Roger, O. 1896 A, p. 122. (Hesperomys.)

Trouessart, E. L. 1898 A, p. 512.

Miocene (Loup Fork); New Mexico.

Peromyscus nematodon (Cope).

Cope, E. D. 1879 E, p. 370. (Hesperomys.)

1881 C, p. 176. (Eumys.)

1881 Q. (Hesperomys.)

1883 S, p. 165, fig. 15. (Hesperomys.)

1884 O, p. 852, pl. lxxvi, fig. 33. (Hesperomys.)

Matthew, W. D. 1899 A, p. 62. (Hesperomys.)

Roger, O. 1896 A, p. 122. (Hesperomys.)

Trouessart, E. L. 1898 A, p. 512.

Miocene (John Day); Oregon.

PACICULUS Cope. Type *P. insolitus* Cope.

Cope, E. D. 1879 E, p. 370.

1881 E, p. 377.

1883 S, p. 166.

1884 O, p. 853.

Nicholson and Lydekker 1889 A, p. 540.

Scott, W. B. 1895 D.

1895 E, p. 286.

Zittel, K. A. 1893 B, p. 536.

Pacicus insolitus Cope.

Cope, E. D. 1879 E, p. 371.

1881 E, p. 377.

1881 Q.

1883 S, p. 166, fig. 15.

1884 O, p. 854, pl. lxxvi, figs. 31, 32.

Matthew, W. D. 1899 A, p. 62.

Roger, O. 1896 A, p. 124.

Trouessart, E. L. 1898 A, p. 540.

Miocene (John Day); Oregon.

Pacicus lockingtonianus Cope.

Cope, E. D. 1881 C, p. 176. (Eumys.)

1881 E, p. 377.

1881 Q.

1883 S, p. 166.

1884 O, p. 854, pl. lxxiv, fig. 10.

Matthew, W. D. 1899 A, p. 62.

Roger, O. 1896 A, p. 124.

Trouessart, E. L. 1898 A, p. 540.

Miocene (John Day); Oregon.

NEOTOMINÆ.

Merriam, C. H. 1894 A, p. 228.

Baird, S. F. 1857 A, p. 445. (Sigmodontes, in part.)

Coues, E. 1877 B, i, p. 7. (Sigmodontes, in part.)

Thomas, O. 1896 A, p. 1020.

Trouessart, E. L. 1898 A, p. 540.

NEOTOMA Say and Ord. Type *N. floridana* Say and Ord.

Say and Ord, 1825, Jour. Acad. Nat. Sci., Phila., iv, pp. 345, 346.

Alston, E. R. 1876 A, p. 85.

Baird, S. F. 1857 A, p. 486.

Coues, E. 1877 B, i, p. 7.

Flower and Lydekker 1891 A, p. 464.

Merriam, C. H. 1894 A, p. 239.

Nicholson and Lydekker 1889 A, p. 1418.

Trouessart, E. L. 1898 A, p. 541.

Zittel, K. A. 1893 B, p. 536.

Neotoma floridana Say and Ord.

Say and Ord, 1818, Bull. Soc. Philom., Paris, p. 181.

Baird, S. F. 1857 A, p. 487, pl. liii, fig. 2.

Coues, E. 1877 B, i, p. 14, pl. i, figs. 1-4.

Leidy, J. 1869 A, p. 407.

1880 A, p. 347.

1889 H, p. 6.

Merriam, C. H. 1894 A, p. 244.

Rhoads, S. N. 1894 A, p. 346.

Roger, O. 1896 A, p. 124.

Say and Ord, 1825, Jour. Acad. Nat. Sci., Phila., iv, p. 346, pls. xxi, xxii.

Trouessart, E. L. 1898 A, p. 541.

Recent; southeastern United States. Pleistocene?; Pennsylvania?

Neotoma magister Baird.

Baird, S. F. 1857 A, p. 498, pl. liii, fig. 4; pl. liv, fig. 978.

Cope, E. D. 1869 E, p. 173. (*N. magister*, *N. floridana*?)

1883 S, p. 373.

Coues, E. 1877 B, i, p. 29, pl. ii, fig. 13.

Leidy, J. 1869 A, p. 407,

1880 A, p. 347.

Mercer, H. C. 1897 A.

Merriam, C. H. 1894 A, p. 244.

Rhoads, S. N. 1894 A, p. 213.

Roger, O. 1896 A, p. 124.

Trouessart, E. L. 1898 A, p. 542.

Pleistocene; Pennsylvania, Virginia, Kentucky, Missouri.

MICROTINÆ.

- Alston, E. R. 1876 A, p. 85. (Arvicolinæ.)
 Baird, S. F. 1857 A, p. 506. (Arvicolinæ.)
 Blackmore, H. P. 1874 A. (Arvicolidæ.)
 Brandt, J. F. 1885 A. (Arvicolini.)
 Coues, E. 1877 B, i, p. 131. (Arvicolinæ.)
 Flower, W. H. 1863 D, p. 419. (Arvicolinæ.)
 Flower and Lydekker 1891 A, p. 465.
 Lataste, F., 1883, Le Nat., ii, pp. 323, 332, 343, 347.
 (Arvicolinæ.)
 1884, Ann. Mus. Civic. Genova, xx, p. 255.
 (Arvicolinæ.)
- Merriam, C. H. 1894 A, p. 227. (Arvicolinæ.)
 Miller, G. S. 1896 A, p. 8.
 Nehring, A. 1875 A.
 Roger, O. 1896 A, p. 124. (Arvicolidæ.)
 Thomas, O. 1896 A, p. 1020.
 Trouessart, E. L. 1898 A, p. 545.
 Tullberg, T. 1899 A, pp. 227, 430. (Arvicolidæ.)
 Zittel, K. A. 1893 B, p. 536. (Arvicolidæ.)

ANAPTOGONIA Cope. Type *A. hiatidens* Cope.

- Cope, E. D. 1871 I, p. 91. [Arvicola (Anapto-
 gonina).]
 1883 S, p. 373. [Arvicola (Anapto-
 gonina).]
 1896 F, p. 379.
 1899 A, p. 201.
 Miller, G. S. 1896 A, p. 74. [Microtus (Anapto-
 gonina).]
 Trouessart, E. L. 1898 A, p. 551. (Anapto-
 gonina.)
- Anapto-
 gonia cloacina** Cope.
 Cope, E. D. 1896 A, p. 380.
 Trouessart, E. L. 1898 A, p. 551.
 Pleistocene; Pennsylvania.
- Allen, J. A. 1877 B, p. 947. [Arvicola (Anapto-
 gonina).]
 Cope, E. D. 1883 S, p. 373, fig. 24, no. 18. [Arvicola
 (Anapto-
 gonina).]
 1896 F, p. 379.
 1899 A, p. 201 (*A. hiatidens*); p. 206 (*Schis-
 todelta sulcata*¹).
 Miller, G. S. 1896 A, p. 74. [Microtus (Anapto-
 gonina).]
 Roger, O. 1896 A, p. 125. (Arvicola.)
 Trouessart, E. L. 1898 A, p. 551.
 Wheatley, C. M. 1871 B.
 Pleistocene; Pennsylvania.

**Anapto-
 gonia hiatidens** Cope.

- Cope, E. D. 1871 I, p. 91, fig. 18. [Arvicola (An-
 aptogonia).]

SYCIUM Cope. Type *S. cloacinum* Cope.

- Cope, E. D. 1899 A, p. 203.

Sycium cloacinum Cope.

- Cope, E. D. 1899 A, p. 203, text figure, p. 204.
 Pleistocene; Pennsylvania.

MICROTUS Schrank. Type *M. arvalis* (Pall.).

- Schrank, F. 1798, Fauna Boica, i, p. 72.
 Unless otherwise indicated, the following
 authors refer to this genus under the name
Arvicola Lacépède, 1801.
 Alston, E. R. 1876 A, p. 85.
 Baird, S. F. 1857 A, p. 509.
 Blackmore, H. P. 1874 A.
 Cope, E. D. 1871 I, p. 87. (Isodelta, subgenus,
 type *Arvicola speothen*.)
 1896 F, p. 379. (Microtus.)
 1899 A, pp. 201, 204. (Microtus.)
 Coues, E. 1877 B, i, p. 149.
 Flower and Lydekker 1891 A, p. 466.
 Lydekker, R. 1885 B, p. 230.
 Miller, G. S. 1896 A, pp. 15, 44 (Microtus); p. 58
 (subgenus Pitymys).
 Nehring, A. 1875 A.
 Owen, R. 1868 A, p. 298.
 Parker, W. K. 1868 A, p. 208, pl. xxiv, figs. 9-13.
 Scott, W. B. 1892 A, p. 407.
 Thomas, O. 1896 A, p. 1021.
 Toms, J. 1850 A, p. 550.
 Trouessart, E. L. 1898 A, p. 552. (Microtus.)
 Zittel, K. A. 1893 B, p. 536.

Microtus didelta Cope.

- Cope, E. D. 1871 I, p. 89, fig. 15 [Arvicola (Pity-
 mys)]; p. 90 [A. (Pitymys) sigmodus].
 Allen, J. A. 1877 B, p. 947. [Arvicola (Pitymys)
 didelta, sigmoda.]
 Cope, E. D. 1883 S, p. 373, fig. 24, no. 15. (Arvic-
 ola.)
 1899 A, pp. 205, 207.
 Roger, O. 1896 A, p. 125. (Arvicola.)
 Trouessart, E. L. 1898 A, p. 555 [Microtus (Pity-
 mys)]; p. 562 (*M. sigmodus*).
 Wheatley, C. M. 1871 B. (*A. sigmodus*.)
 Pleistocene; Pennsylvania.

Microtus diluvianus Cope.

- Cope, E. D. 1896 F, p. 381.
 1899 A, p. 205, text figure.
 Trouessart, E. L. 1898 A, p. 561.
 Pleistocene; Pennsylvania.

Microtus involutus Cope.

- Cope, E. D. 1871 I, p. 89, fig. 16. [Arvicola (Pity-
 mys).]

¹ This is regarded by Cope as possibly different from *A. hiatidens*.

Allen, J. A. 1877 B, p. 947. (Arvicola.)

Cope, E. D. 1883 S, p. 374, fig. 25.

1899 A, p. 205.

Roger, O. 1896 A, p. 125. (Arvicola.)

Trouessart, E. L. 1898 A, p. 562.

Wheatley, C. M. 1871 B.

Pleistocene; Pennsylvania.

Microtus pennsylvanicus (Ord).

Baird, S. F. 1857 A, p. 523. (Arvicola.)

Cope, E. D. 1871 I, p. 87. (Arvicola riparia.)

Coues, E. 1877 B, i, p. 156, pl. iv, figs. 42-49. (Arvicola riparius.)

Leidy, J. 1862 A, p. 423. ("Arvicola.")

1869 A, p. 406. (Arvicola riparia?)

1889 H, p. 6. (Arvicola riparius.)

Miller, G. S. 1894 A, p. 190, pl. iii, fig. 2; pl. iv, fig. 1. (Arvicola riparius.)

1896 A, p. 63, fig. 33, c. [Microtus (Microtus).]

Trouessart, E. L. 1898 A, p. 562. [Microtus (Microtus).]

Recent; eastern United States. Pleistocene; Illinois, Virginia.

Microtus pinetorum (Le Conte).

Le Conte, J. L., 1829, Ann. Lyc. Nat. Hist. N. Y., iii, p. 132, pl. ii. (Psammomys.)

Baird, S. F. 1857 A, p. 544, pl. liv, No. 1719. [Arvicola (Pitymys).]

Cope, E. D. 1871 I, p. 87. [Arvicola (Pitymys).]

1899 A, p. 205.

Coues, E. 1877 B, i, p. 219, pl. v, figs. 70-73. [Arvicola (Pitymys).]

Miller, G. S. 1896 A, p. 59, pl. i, fig. 2; text fig. 31, a. [Microtus (Pitymys).]

Trouessart, E. L. 1898 A, p. 555. [Microtus (Pitymys).]

Wheatley, C. M. 1871 B.

Recent; United States. Pleistocene?; Pennsylvania. Not given in Cope 1899 A, as found in Port Kennedy cave.

Microtus speothen Cope.

Cope, E. D. 1871 I, p. 87, fig. 13. (Arvicola.)

Allen, J. A. 1877 B, p. 947. [Arvicola (Isodelta) speothen, A. (Pitymys) tetradeleta.]

Cope, E. D. 1871 I, p. 88, fig. 14. (Arvicola tetradeleta.)

1883 S, p. 373, fig. 24, no. 13 [Arvicola (Isodelta)]; p. 373, fig. 24, no. 14 (A. tetradeleta).

1896 F, p. 383.

1899 A, pp. 205, 206.

Miller, G. S. 1896 A, p. 75. [Microtus (Isodelta).]

Roger, O. 1896 A, p. 125. (Arvicola.)

Trouessart, E. L. 1898 A, p. 561.

Wheatley, C. M. 1871 B. (Arvicola.)

Pleistocene; Pennsylvania.

Microtus sp. indet.

Cope, E. D. 1889 F, p. 161. (Arvicola.)

Pleistocene (Equus beds); Oregon.

FIBER Cuv. Type *Castor zibethicus* Linn.

Cuvier, G., 1800, Leçons d Anat. Comp., i, tabl. i.

Baird, S. F. 1857 A, p. 560.

Brandt, J. F. 1855 A, p. 171. (Ondatra.)

Cope, E. D. 1889 C, p. 249.

Coues, E. 1877 B, i, p. 251.

Flower and Lydekker 1891 A, p. 470.

Miller, G. S. 1896 A, pp. 14, 71.

Nicholson and Lydekker 1889 A, p. 1417.

Tomes, J. 1850 A, p. 550.

Tullberg, T. 1899 A, p. 235.

Zittel, K. A. 1893 B, p. 537.

Fiber zibethicus (Linn.).

Linnaeus, C., 1766, Syst. Nat. ed. xii, p. 79. (Castor.)

Baird, S. F. 1857 A, p. 561, pl. liv.

Brandt, J. F. 1855 A, p. 171, pl. iii, figs. 9-16. (Ondatra.)

Coues, E. 1877 B, i, p. 254.

Flower and Lydekker 1891 A, p. 471, fig. 209.

Holmes, F. S. 1850 B, p. 201. ("Muskrat.")

Leidy, J. 1860 B, p. 113, pl. xxii, figs. 1-4.

1869 A, p. 406.

Miller, G. S. 1896 A, p. 72, pl. ii, fig. 13, text figs. 37-39.

Owen, R. 1866 B, p. 375, fig. 241.

Roger, O. 1896 A, p. 126.

Trouessart, E. L. 1898 A, p. 566.

Tullberg, T. 1899 A, p. 235.

Wheatley, C. M. 1871 A. (Fiber sp. indet.)

Recent; North America north of Mexico. Pleistocene; South Carolina, New Jersey, Pennsylvania?.

HELISCOMYS Cope. Type *H. vetus* Cope.

Cope, E. D. 1873 CC, p. 3.

Allen, J. A. 1877 A, xi, p. 936.

Cope, E. D. 1874 B, p. 475.

1881 E, p. 375.

1883 S, p. 57.

1884 O, p. 845.

Nicholson and Lydekker 1889 A, p. 1419.

Zittel, K. A. 1893 B, p. 582.

A genus of uncertain position.

Heliscomys vetus Cope.

Cope, E. D. 1873 CC, p. 3.

Allen, J. A. 1877 A, xi, p. 936.

Cope, E. D. 1874 B, p. 475.

1881 E, p. 375.

1881 Q.

1883 S, p. 56, fig. 13, a-d.

1884 O, p. 847, pl. lxxv, figs. 14-18.

Matthew, W. D. 1899 A, p. 52.

Roger, O. 1896 A, p. 120.

Trouessart, E. L. 1898 A, p. 578.

Oligocene (White River); Colorado.

GEOMYIDÆ.

- Alston, E. R. 1876 A, p. 87.
 Baird, S. F. 1857 A, p. 364. (Saccomyidæ.)
 Brandt, J. F. 1855 A, p. 188. (Sciurospalacoides.)
 Cope, E. D. 1875 B. (Saccomyidæ.)
 Coues, E. 1875 B, p. 275.
 1875 C, p. 130.
 1877 B, viii, p. 488 (Saccomyidæ); p. 492 (Geomyidæ); x, p. 607 (Geomyidæ).
 Flower, W. H. 1883 D, p. 419.
 Flower and Lydekker 1891 A, p. 478.
- Merriam, C. H. 1895 A.
 Nicholson and Lydekker 1889 A, p. 1416.
 Roger, O. 1896 A, p. 119.
 Scott, W. B. 1895 D, p. 283.
 Thomas, O. 1896 A, p. 1022.
 Trouessart, E. L. 1898 A, p. 571.
 Tullberg, T. 1899 A, pp. 312, 475 (Geomyidæ); p. 465 (Protoptychidæ).
 Winge, H. 1888 A, p. 138. (Saccomyidæ.)
 Zittel, K. A. 1893 B, p. 532.

PROTOPTYCHUS Scott. Type *P. hatcheri* Scott.

Scott, W. B. 1895 E, p. 269.
 1895 D, p. 923.

Tullberg, T. 1899 A, p. 465.

Protoptychus hatcheri Scott.

Scott, W. B. 1895 E, p. 269, figs. 1-6.

Matthew, W. D. 1899 A, p. 49.
 Roger, O. 1896 A, p. 119.
 Scott, W. B. 1895 D, p. 923.
 Trouessart, E. L. 1898 A, p. 577.
 Tullberg, T. 1899 A, p. 464.
 Eocene (Uinta); Utah.

GEOMYS Raf. Type *Mus tuza* Ord.

Rafinesque, C. S., 1817, Amer. Month. Mag., ii, p. 45.

- Alston, E. R. 1876 A, p. 87.
 Baird, S. F. 1857 A, p. 368.
 Coues, E. 1875 C, p. 130.
 1877 B, x, p. 611.
 Flower and Lydekker 1891 A, p. 478.
 Merriam, C. H. 1895 A, p. 109.
 Nicholson and Lydekker 1889 A, p. 1416.
 Tomes, J. 1850 A, p. 549.
 Trouessart, E. L. 1898 A, p. 571.

Geomys bisulcatus Marsh.

- Marsh, O. C. 1871 E, p. 121.
 Allen, J. A. 1877 B, p. 947.
 King, C. 1878 A, p. 430.
 Matthew, W. D. 1899 A, p. 66.
 Roger, O. 1896 A, p. 120.
 Trouessart, E. L. 1898 A, 571.
 Miocene (Loup Fork); Nebraska.

Geomys bursarius (Shaw).

- Shaw, G., 1800, Trans. Linn. Soc. v, p. 227, pl. viii. (Mus.)
 Baird, S. F. 1857 A, p. 372, pl. 1, fig. 2.
 Cope, E. D. 1869 E, p. 173.
 Coues, E. 1875 C, p. 131.
 1877 B, x, p. 613.
 Leidy, J. 1862 A. (Pseudostoma,) 1867 B.
 1869 A, p. 406.
 Merriam, C. H. 1895 A, p. 120, pl. i; pl. ix, figs. 8, 9; pl. x, fig. 6; pl. xiii, fig. 11; pl. xiv, fig. 2; pl. xv, fig. 11; pl. xvii, fig. 3; pl. xviii, fig. 1; pl. xix, fig. 3; text figs. 1, 8, 11, 55; with synonymy.
 Trouessart, E. L. 1898 A, p. 571.
 Williston, S. W. 1897 I, p. 304.
 Recent; Mississippi Valley. Pleistocene; Illinois, Nebraska.

THOMOMYS Wied. Type *T. rufescens* Wied.

Wied., 1839, N. Act. Acad. Leop. Carol., xix, p. 377.

- Allen, J. A. 1893, A, pp. 53, 64.
 Alston, E. R. 1876 A, p. 87.
 Baird, S. F. 1857 A, p. 388.
 Coues, E. 1875 C, p. 134.
 1877 B, x, p. 621.
 Flower and Lydekker 1891 A, p. 478.
 Merriam, C. H. 1898 A, p. 198.
 Nicholson and Lydekker 1889 A, p. 1416.
 Trouessart, E. L. 1898 A, p. 575.

Thomomys bulbivorus (Richardson).

- Richardson, J., 1829, Fauna Bor.-Amer., i, p. 206, pl. 18B.
 Allen, J. A. 1893 A, p. 56, pl. i, fig. 14.
 Baird, S. F. 1857 A, p. 389, pl. lii, fig. 1.
 Brandt, J. F. 1855 A, p. 187. ((Thomomys).)
 Cope, E. D. 1883 S, p. 374.
 1889 S, p. 980.

- Coues, E. 1875 C, p. 136. (T. talpoides bulbivorus.)
 1877 B, x, p. 626. (T. talpoides bulbivorus.)
 Merriam, C. H. 1895 A, p. 198, figs 68-71.
 Trouessart, E. L. 1898 A, p. 575.
 Tullberg, T. 1899 A, p. 328.
 Recent; northwestern United States. Pleistocene; Oregon.

Thomomys clusius Coues.

- Coues, E. 1875 C, p. 138.
 Allen, J. A. 1893 A, pp. 61, 62, pl. i, fig. 2.
 Cope, E. D. 1878 H, p. 389. ("Thomomys near clusius.")
 1889 F.
 1889 S, p. 980.
 Coues, E. 1877 B, x, p. 629, pl. vii.
 Trouessart, E. L. 1898 A, p. 576.
 Recent; Wyoming, Idaho. Pleistocene; (Equus beds); Oregon.

Thomomys talpoides Richardson.

- Richardson, J., 1828, Zool. Jour., iii, p. 518.
 Allen, J. A. 1893 A, p. 66.
 Cope, E. D. 1878 H, p. 389.
 1889 F.
 Coues, E. 1875 C, pp. 134, 135.

PLEUROLICUS Cope. Type *P. sulcifrons* Cope.

Cope, E. D. 1879 D, p. 66.

1879 B, p. 55.

1881 E, p. 380.

1883 S, p. 166.

1884 O, p. 866.

Flower and Lydekker 1891 A, p. 479.

Nicholson and Lydekker 1889 A, p. 1416.

Scott, W. B. 1895 D.

1895 E, pp. 270, 286.

Zittel, K. A. 1893 B, p. 533.

Pleurolicus diplophysus Cope.

Cope, E. D. 1881 E, p. 381.

1881 Q.

1883 S, p. 167, fig. 16, c; d.

1884 O, pp. 867, 869, pl. lxiv, fig. 9.

Matthew, W. D. 1899 A, p. 62.

Roger, O. 1896 A, p. 120.

Scott, W. B. 1895 E, p. 284, figs. 5, 6.

Trouessart, E. L. 1898 A, p. 578.

Miocene (John Day); Oregon.

Coues, E. 1877 B, x, p. 623.

Roger, O. 1896 A, p. 120.

Trouessart, E. L. 1898 A, p. 576.

Recent; Canada to Upper Missouri River,
 Pleistocene; Oregon.

Pleurolicus leptophrys Cope.

Cope, E. D. 1881 E, p. 381.

1881 Q.

1883 S, p. 167, fig. 16, a, b.

1884 O, p. 868, pl. lxiv, figs. 7, 8.

Matthew, W. D. 1899 A, p. 62.

Roger, O. 1896 A, p. 120.

Trouessart, E. L. 1898 A, p. 578.

Miocene (John Day); Oregon.

Pleurolicus sulcifrons Cope.

Cope, E. D. 1879 D, p. 66.

1879 B, p. 55.

1881 E, p. 381.

1881 Q.

1883 S, p. 167,

1884 O, p. 867, pl. lxiv, fig. 6.

Matthew, W. D. 1899 A, p. 62.

Roger, O. 1896 A, p. 120.

Trouessart, E. L. 1898 A, p. 578.

Miocene (John Day); Oregon.

ENTOPTYCHUS Cope. Type *E. cavifrons* Cope.

Cope, E. D. 1879 D, p. 64.

1881 E, p. 378.

1883 S, p. 168.

1884 O, p. 855.

Flower and Lydekker 1891 A, p. 479.

Nicholson and Lydekker 1889 A, p. 1416.

Scott, W. B. 1895 D.

1895 E, p. 286.

Zittel, K. A. 1893 B, p. 533.

Entoptychus cavifrons Cope.

Cope, E. D. 1879 D, p. 64.

1879 B, p. 55.

1881 E, p. 380.

1881 Q.

1883 S, p. 169.

1884 O, pp. 858, 862, pl. lxiv, fig. 4.

Matthew, W. D. 1899 A, p. 62.

Roger, O. 1896 A, p. 120.

Trouessart, E. L. 1898 A, p. 578.

Miocene (John Day); Oregon.

Entoptychus crassiramus Cope.

Cope, E. D. 1879 D, p. 65.

1879 B, p. 55.

1881 E, p. 380.

1881 Q.

1883 S, p. 168, fig. 17.

1884 O, pp. 858, 864, pl. lxiv, fig. 5.

Matthew, W. D. 1899 A, p. 62.

Roger, O. 1896 A, p. 120.

Trouessart, E. L. 1898 A, p. 579.

Miocene (John Day); Oregon.

Entoptychus lambdoideus Cope.

Cope, E. D. 1881 E, p. 380.

1881 Q.

1883 S, p. 169.

1884 O, pp. 858, 860, pl. lxiv, fig. 2.

Matthew, W. D. 1899 A, p. 62.

Roger, O. 1896 A, p. 120.

Trouessart, E. L. 1898 A, p. 578.

Miocene (John Day); Oregon.

Entoptychus minor Cope.

Cope, E. D. 1881 E, p. 379.

1881 Q.

1883 S, p. 170.

1884 O, pp. 858, 861, pl. lxiv, fig. 3.

Matthew, W. D. 1899 A, p. 62.

Roger, O. 1896 A, p. 120.

Trouessart, E. L. 1898 A, p. 578.

Miocene (John Day); Oregon.

Entoptychus planifrons Cope.

Cope, E. D. 1879 D, p. 65.

1879 B, p. 55.

1881 E, p. 379.

1881 Q.

1883 S, p. 167, fig. 18.

Matthew, W. D. 1899 A, p. 62.

Roger, O. 1896 A, p. 120.

Trouessart, E. L. 1898 A, p. 578.

Zittel, K. A. 1893 B, p. 533, fig. 445.

Miocene (John Day); Oregon.

DIPODIDÆ.

Allen, J. A. 1900 A, p. 199.
 Baird, S. F. 1857 A, p. 428. (Dipodinae.)
 Flower, W. H. 1883 D, p. 419.
 Flower and Lydekker 1891 A, p. 479.
 Nicholson and Lydekker 1889 A, p. 1416.

Thomas, O. 1896 A, p. 1023.
 Tullberg, T. 1899 A, pp. 182, 408.
 Winge, H. 1888 A, p. 118.
 Zittel, K. A. 1893 B, p. 526.

ZAPODINÆ.

Coues, E., 1875, Bull. U. S. Geol. Surv., ser. 2, no. 5, p. 253. (Zapodidæ.)
 Alston, E. R. 1876 A, p. 89. (Jaculinae.)
 Coues, E. 1877 B, vii, p. 454. (Zapodidæ.)

Flower and Lydekker 1891 A, p. 480.
 Thomas, O. 1896 A, p. 1023.
 Trouessart, E. L. 1898 A, p. 590.

ZAPUS Coues. Type *Dipus hudsonius* Zimm.

Coues, E., 1875, Bull. U. S. Geol. Surv. Terr., ser. 2, no. 5, p. 253.
 Allen, J. A. 1900 A, p. 200.
 Baird, S. F. 1857 A, p. 429. (Jaculus.)
 Brandt, J. F. 1855 A. (Jaculus.)
 Coues, E. 1876 A.
 1877 B, vii, p. 465.
 Flower and Lydekker 1891 A, p. 480.
 Nicholson and Lydekker 1889 A, p. 1416.
 Palmer, T. S. 1897 A.
 Preble, E. A. 1899 A, p. 13.
 Thomas, O. 1896 A, p. 1023, footnote.

Zapus hudsonius (Zimm.)

Zimmermann, E., 1780, Geog. Gesch., ii, p. 358. (Dipus.)
 Allen, J. A. 1900 A, p. 201.

Baird, S. F. 1857 A, p. 430. (Jaculus.)
 Cope, E. D. 1871 I, p. 86. (Jaculus.)
 1883 S, p. 373. (Meriones.)
 1899 A, p. 200.
 Coues, E. 1876 A.
 1877 B, vii, p. 465.
 Flower and Lydekker 1891 A, p. 480. (Z. hudsonianus.)
 Nicholson and Lydekker 1889 A, p. 1416.
 Preble, E. A. 1899 A, p. 15, pl. i, figs. 3, 3a.
 Trouessart, E. L. 1898 A, p. 590.
 Tullberg, T. 1899 A, p. 185.
 Wheatley, C. M. 1871 B. (Jaculus.)
 Zittel, K. A. 1893 B, p. 527.

Recent; Alaska to Hudson Bay, south to New Jersey, west to Iowa and Missouri. Pleistocene; Pennsylvania.

Superfamily HYSTRICOMORPHA.

Alston, E. R. 1876 A, p. 91.
 Brandt, J. F. 1855 A.
 Cope, E. D. 1881 E, p. 361.
 1883 S, p. 43.
 1884 O, p. 812.
 Flower and Lydekker 1891 A, p. 480.
 Gadow, H. 1898 A, p. 43.
 Haeckel, E. 1895 A, p. 510.
 Lydekker, R. 1896 B.

Nicholson and Lydekker 1889 A, p. 1413.
 Schlosser, M. 1884 A, p. 98.
 1890 C, p. 250.
 Slade, D. D. 1888 A, p. 243.
 1892 B.
 Steinmann and Döderlein 1890 A, p. 733.
 Thomas, O. 1896 A, p. 1024.
 Tullberg, T. 1899 A, pp. 82, 363.
 Zittel, K. A. 1893 B, p. 539.

HYSTRICIDÆ.

Allen, J. A. 1877 A, iii, p. 385.
 Alston, E. R. 1876 A, p. 93.
 Baird, S. F. 1857 A, p. 565.
 Cope, E. D. 1875 C, p. 26.
 Flower, W. H. 1883 D, p. 420.
 Flower and Lydekker 1891 A, p. 484.
 Leidy, J. 1871 C, p. 364.
 Nicholson and Lydekker 1889 A, p. 1415.

Roger, O. 1896 A, p. 127.
 Trouessart, E. L. 1898 A, p. 614.
 Tullberg, T. 1899 A, pp. 83, 366.
 Turner, H. N. 1848 A.
 Winge, H. 1888 A, p. 126.
 Zittel, K. A. 1893 B, p. 539.

No species of this family, as its limits are here recognized, are found in North America.

ERETHIZONTIDÆ.

Thomas, O. 1896 A, p. 1025.
 Allen, J. A. 1877 A, iii, p. 385. (Hystricidæ, in part.)
 Baird, S. F. 1857 A, p. 565. (Hystricidæ, in part.)

Flower, W. H. 1883 D, p. 420. (Hystricidæ, in part.)
 Trouessart, E. L. 1898 A, p. 619. (Cœndidæ.)
 Tullberg, T. 1899 A, pp. 108, 368.

ERETHIZONTINÆ.

Thomas, O. 1896 A, p. 1025.

ERETHIZON F. Cuv. Type *Hystrix dorsata* Linn.

Cuvier, F., 1822, Mém. de Muséum, Paris, ix, p. 426.
 Allen, J. A. 1877 A, iii, p. 386.
 Alston, E. R. 1876 A, p. 94. (Erythizon.)
 Flower, W. H. 1883 D, p. 420.
 Flower and Lydekker 1891 A, p. 484.
 Leidy, J. 1858 E, p. 22. (Hystriopsis, subgenus.)
 Nicholson and Lydekker 1889 A, p. 1415.
 Winge, H. 1888 A, p. 129.
 Zittel, K. A. 1893 B, p. 540.

Erethizon cloacinus Cope.

Cope, E. D. 1871 I, p. 93, fig. 19.
 Allen, J. A. 1877 A, iii, p. 398.
 Cope, E. D. 1883 S, p. 379.
 1899 A, p. 199.
 Roger, O. 1896 A, p. 127.
 Trouessart, E. L. 1898 A, p. 620.
 Wheatley, C. M. 1871 B.
 Pleistocene; Pennsylvania.

Erethizon dorsatus (Linn.).

Linnaeus, C., 1758, Syst. Nat., ed. 10, i, p. 57. (Hystrix.)

Allen, J. A. 1877 A, iii, p. 568.
 Cope, E. D. 1899 A, p. 198. (E. dorsatum?)
 Leidy, J. 1859 H, p. 5.
 Trouessart, E. L. 1898 A, p. 620.
 Tullberg, T. 1899 A, p. 109.
 Recent; northeastern U. S.; Canada, west to
 Saskatchewan. Pleistocene; Pennsylvania.

Erethizon venustus (Leidy).

Leidy, J. 1858 E, p. 22. [Hystrix (Hystriopsis).]
 Allen, J. A. 1877 A, iii, p. 397. (Hystrix? venustus.)
 Cope, E. D. 1881 Q. (Hystrix.)
 Hayden, F. V. 1858 B, p. 407. (Hystrix.)
 King, C. 1878 A, p. 430. (Hystrix.)
 Leidy, J. 1869 A, pp. 343, 407, pl. xxvi, figs. 23, 24.
 (Hystrix.)
 1871 C, p. 364. (Hystrix.)
 Roger, O. 1896 A, p. 127.
 Trouessart E. L. 1898 A, p. 620.
 Zittel, K. A. 1893 B, p. 540.
 Pleistocene; Nebraska.

CASTOROIDIDÆ.

Allen, J. A. 1887 A, v, p. 419.
 Flower and Lydekker 1891 A, p. 488.
 Moore, J. 1891 A.
 Nicholson and Lydekker 1889 A, p. 1415.

Roger, O. 1896 A, p. 136.
 Trouessart, E. L. 1898 A, p. 630.
 Zittel, K. A. 1893 B, p. 547.

CASTOROIDES Foster. Type *C. ohioensis* Foster.

Foster, J. W. 1838 A, p. 81,
 Allen, J. A. 1877 A, v, p. 419.
 Alston, E. R. 1876 A, p. 78.
 Baird, S. F. 1857 A, p. 363.
 Cope, E. D. 1883 S, p. 370.
 Flower and Lydekker 1891 A, p. 488.
 Moore, J. 1893 A, p. 67.
 Nicholson and Lydekker 1889 A, p. 1415.
 Pictet, F. J. 1853 A, p. 252.
 Scott, W. B. 1892 A, p. 410.
 Winge, H. 1888 A, p. 139.
 Wyman, J. 1846 B, p. 391.
 1850 A, p. 56.
 Zittel, K. A. 1893 B, p. 547.

Castoroides ohioensis Foster.

Foster, J. W. 1838 A, p. 81, figs. A-D.
 Agassiz, L. 1851 B.
 Allen, J. A. 1877 A, v, p. 423.
 Alston, E. R. 1876 A, p. 79.
 Baird, S. F. 1857 A, p. 363.
 Cope, E. D. 1883 S, p. 370, figs. 22, 23.
 1888 I, p. 6, figs. 3, 4.
 1889 C, p. 264.
 Cope and Wortman 1884 A, p. 37, pl. iv, figs. 1-3.
 De Kay, J. E. 1842 C, p. 75, pl. xi, fig. 3 [Castor
 (Trogotherium) ohioensis].
 Foster, J. W. 1837 A, p. 80, figs. 15-18. (No generic
 or specific name.)
 Hall, J. 1846 A.
 1846 B.

Kindle, E. M. 1898 A, p. 485.
 Langdon, F. W. 1883 A.
 Le Conte, J. L. 1852 C.
 Leidy, J. 1860 B, p. 114, pl. xxii, figs. 5-8.
 1867 C, p. 97.
 1869 A, p. 405.
 1880 A, p. 347.
 1889 H, p. 14, pl. ii, figs. 7-20.
 Mercer, H. C. 1894 A, p. 98.
 Miller, G. S. 1899 B, p. 375.
 Moore, J. 1890 A.
 1890 B.
 1891 A.
 1893 A.
 1900 A, p. 171, pls. i, ii.
 Newberry, J. S. 1870 A, p. 83.
 1874 A, p. 92.
 1875 A, p. vi.
 Pictet, F. J. 1853 A, p. 253.
 Pomel, A. 1848 D, p. 165.
 Roger, O. 1896 A, p. 136.
 Trouessart, E. L. 1898 A, p. 630.
 Whittlesey, C. 1848 A, p. 215.
 Wyman, J. 1846 A.
 1846 B, pls. 37-39.
 1850 A, pp. 62-64, fig. 5.
 1850 D, p. 280.
 Tullberg, T. 1899 A, p. 474.
 Pleistocene; Ohio, Indiana, Illinois, Tennessee,
 New York, South Carolina, Pennsylvania,
 Texas, Michigan.

DASYPROCTIDÆ.

- Adloff, P. 1898 A, p. 388. (Genus *Dasyprocta*.)
 Alston, E. R. 1876 A, p. 95.
 Flower and Lydekker 1889 A, p. 488.
 Nicholson and Lydekker 1889 A, p. 1414.
 Parker, W. K. 1868 A, p. 207, pl. xxiv, fig. 8.
 (Genus *Dasyprocta*.)

- Roger, O. 1896 A, p. 128.
 Trouessart, E. L. 1898 A, p. 633.
 Tullberg, T. 1899 A, pp. 90, 370. (*Caviidæ*, in part.)
 Winge, H. 1888 A, p. 135. (*Dasyproctini*.)
 Zittel, K. A. 1893 B, p. 540.

AGOUTI Lacépède. Type *Mus paca* Linn.

- Lacépède, B. G., 1799, Tab. ord., gen. mamm., p. 9.
 Cuvier, F., 1807, Ann. Mus., Paris, x, p. 203. (Cœlogenys.)
 Flower and Lydekker 1891 A, p. 489. (Cœlogenys.)
 Harlan, R. 1825 A, p. 126. (*Osteopera*, type *O. platycephala*=*C. paca*.)
 Palmer, T. S. 1897 A.
 Thomas, O. 1896 A, p. 1026. (Cœlogenys.)
 Trouessart, E. L. 1898 A, p. 635. (Cœlogenys.)
 Tullberg, T. 1899 A, p. 91. (Cœlogenys.)

Agouti paca (Linn.).

- Linnæus*, C., 1766, Syst. Nat., ed. 12, p. 81. (Mus.)

- Harlan, R. 1825 A, p. 126. (*Osteopera platycephala*.)
 Leidy, J. 1869 A, p. 444. (Cœlogenys.)
 Palmer, T. S. 1897 A.
 Pictet, F. J. 1853 A, p. 254. (Cœlogenys.)
 Roger, O. 1896 A, p. 129. (Cœlogenys.)
 Trouessart, E. L. 1898 A, p. 635. (Cœlogenys.)
 Tullberg, T. 1899 A, p. 91.
 Recent; Mexico to Paraguay. Reported by Harlan as a fossil found in vicinity of Philadelphia; but doubtless transported thither.

CAVIIDÆ.

- Adloff, P. 1898 A, p. 387. (Genus *Cavia*.)
 Alezais, H. 1898 A. (Genus *Cavia*.)
 1899 A. (Genus *Cavia*.)
 Flower and Lydekker 1891 A, p. 489.

- Thomas, O. 1896 A, p. 1026.
 Trouessart, E. L. 1898 A, p. 636.
 Tullberg, T. 1899 A, pp. 90, 370. (In part.)
 Zittel, K. A. 1893 B, p. 544.

HYDROCHÆRUS Brisson. Type *Sus hydrochæris* Linn.

- Brisson, A. D., 1762, Reg. Anim., pp. 12, 80.
 Burmeister, H. 1879 B, p. 263.
 Flower and Lydekker 1891 A, p. 490.
 Leidy, J. 1853 E, p. 241. (*Oromys*, type *O. æsopi*; no description.)
 Nicholson and Lydekker 1889 A, p. 1414.
 Owen, R. 1868 A, p. 295, fig. 235.
 Schlosser, M. 1890 C, p. 251.
 Thomas, O. 1896 A, p. 1026.
 Tones, J. 1850 A, p. 557.
 Tullberg, T. 1899 A, p. 105.
 Zittel, K. A. 1893 B, p. 546.

Hydrochærus æsopi Leidy.

- Leidy, J. 1856 J, p. 165.
 Allen, J. A. 1877 B, p. 949.
 Cope, E. D. 1883 S, p. 379, fig. 30.
 1888 I, p. 9, fig. 6.
 Leidy, J. 1853 E, p. 241. (*Oromys æsopi*; no description.)

- Leidy, J. 1860 B, p. 112, pl. xxi, figs. 3-6.
 1869 A, p. 407.
 Roger, O. 1896 A, p. 136.
 Trouessart, E. L. 1898 A, p. 643.
 Pleistocene; South Carolina.

Hydrochærus robustus Leidy.

- Leidy, J. 1888 B, p. 276, fig. 1.
 1890 B, p. 184. (H.? *magnus* Gerv. and Amegh.)
 Roger, O. 1896 A, p. 136.
 Pleistocene, Nicaragua, Florida?
 There is doubt about the identification of the Florida specimen.
 Dr. Jeffries Wyman has reported the finding of a skull of the capybara, *H. hydrochæris*, on the southwestern frontier of the United States.
 Proc. Bost. Soc. Nat. Hist., vii, 1860, p. 350.

Suborder DUPLICIDENTATA.

- Alston, E. R. 1876 A.
 Flower and Lydekker 1891 A, p. 491.
 Nicholson and Lydekker 1889 A, p. 1412.
 Palmer, T. S. 1897 A.

- Schlosser, M. 1884 A, p. 123. (Pliodonta.)
 Thomas, O. 1896 A, p. 1026.
 Tullberg, T. 1899 A, pp. 42, 338.
 Woodward, A. S. 1898 B, p. 377.

Superfamily LAGOMORPHA.

Brandt, J. F. 1855 A.
Cope, E. D. 1881 E, p. 361.
1883 S, p. 43.
1884 O, p. 812.
Gadow, H. 1898 A, p. 42.
Lydekker, R. 1896 B.
Major, Fors. 1893 A, p. 208.
1899 A, p. 433.

Roger, O. 1896 A, p. 140.
Schlosser, M. 1884 A, p. 98.
Slade, D. D. 1892 B.
Steinmann and Döderlein 1890 A, p. 735.
Thomas, O. 1896 A, p. 1026.
Zittel, K. A. 1893 B, p. 549.

OCHOTONIDÆ.

Trouessart, E. L. 1898 A, p. 644.
Allen, J. A. 1877 A, iv, p. 405. (Lagomyidæ.)
Flower, W. H. 1883 D, p. 421. (Lagomyidæ.)
Flower and Lydekker 1891 A, p. 491. (Lagomyidæ.)

Major, Fors. 1899 A, p. 463. (Lagomyidæ.)
Schlosser, M. 1884 A, p. 9. (Lagomyidæ.)
Tullberg, T. 1899 A, p. 53. (Lagomyidæ.)
Zittel, K. A. 1893 B, p. 551. (Lagomyidæ.)

OCHOTONA Link. Included *O. pusillus*, *alpinus*, and *ochotona*.

Link H. F., 1795, Zool. Beytr., i, pt. ii, p. 74.
Allen, J. A. 1877 A, p. 407. (Lagomys.)
Cope, E. D. 1871 I, p. 93. (Praotherium.)
Cuvier, G., 1798, Tabl. Elém., p. 132. (Lagomys.)
Flower and Lydekker 1891 A, p. 491. (Lagomys.)
Major, Fors. 1899 A, p. 433. (Lagomys.)
Meyer, H. 1845 A. (Lagomys.)
Thomas, O. 1896 A, p. 1026.
Trouessart, E. L. 1898 A, p. 645 (Ochotona); p. 649 (Praotherium).
Winge, H. 1888 A, p. 112. (Lagomys.)

Zittel, K. A. 1893 B, p. 553. (Lagomys.)

Ochotona palatinus (Cope).

Cope, E. D. 1871 I, pp. 94, 102, fig. 20. (Praotherium.)
1883 S, p. 379. (Lagomys.)
1899 A, p. 209. (Lagomys.)
Roger, O. 1896 A, p. 140. (Praotherium.)
Trouessart, E. L. 1898 A, p. 649. (Praotherium.)
Pleistocene; Pennsylvania.

LEPORIDÆ.

Allen, J. A. 1877 A, ii, p. 265.
Alston, E. R. 1876 A, p. 97.
Baird, S. F. 1857 A, p. 572.
Brandt, J. F. 1855 A.
Cope, E. D. 1881 J, p. 545.
Flower and Lydekker 1891 A, p. 492.
Giebel, C. G. 1880 A.
Hemstedt, R. 1870 A.
Hilgendorf, F. 1866 A, p. 673.
Howes, G. B. 1887 B.
Leidy, J. 1871 C, p. 363.
Major, Fors. 1899 A, p. 465.

Marsh, O. C. 1877 E.
Nicholson and Lydekker 1889 A, p. 1412.
Parker, W. K. 1868 A, p. 207.
Roger, O. 1896 A, p. 140.
Steinmann and Döderlein 1890 A, p. 735.
Thomas, O. 1896 A, p. 1027.
Tomes, J. 1850 A, p. 560.
Trouessart, E. L. 1898 A, p. 648.
Tullberg, T. 1899 A, p. 50.
Winge, H. 1888 A, p. 110.
Woodward, M. F. 1894 A.
Zittel, K. A. 1893 B, p. 550.

PALÆOLAGUS Leidy. Type *P. haydeni* Leidy.

Leidy, J. 1856 I, p. 89.
Cope, E. D. 1873 T, p. 4. (Tricium, type *T. avunculus* = *P. haydeni*.)
1874 B, p. 477.
1881 E, p. 381.
1883 S, p. 170.
1884 O, p. 870.
Leidy, J. 1869 A, p. 331.
1871 C, p. 363.
Lydekker, R. 1887 A, p. 325.
Major, Fors. 1899 A, pp. 443, 470.
Nicholson and Lydekker 1889 A, p. 1412.
Winge, H. 1888 A, p. 113.
Zittel, K. A. 1893 B, p. 550.

Palæolagus haydeni Leidy.

Leidy, J. 1856 I, p. 89.

Cope, E. D. 1873 S, p. 1. (*P. agapetillus*.)
1873 T, p. 4 (*Tricium avunculus*); p. 5 (*T. agapetillum*.)
1873 CC, p. 4. (*Tricium agapetillum*, *T. annæ*, *T. avunculus*.)
1874 B, p. 478. (*P. haydeni*, *P. agapetillus*.)
1879 B, p. 55.
1879 D, p. 63.
1881 E, p. 384. (*P. haydeni*, *P. agapetillus*.)
1881 Q. (*P. haydeni*, *P. agapetillus*.)
1883 S, p. 173, fig. 20.
1884 O, pp. 874, 875, pl. lxvi, figs. 1-27.
Hayden, F. V. 1858 B, p. 158.
King, C. 1878 A, p. 412.
Leidy, J. 1869 A, pp. 331, 404, pl. xxvi, figs. 14-20.
1871 C, p. 363.
Lydekker, R. 1887 A, p. 326.

- Major, Fors. 1899 A, p. 443, pl. xxxvi, fig. 36.
 Matthew, W. D. 1899 A, p. 53.
 Roger, O. 1896 A, p. 140.
 Trouessart, E. L. 1898 A, p. 648.
 Zittel, K. A. 1893 B, p. 550, fig. 464.

Oligocene (White River); South Dakota,
 Nebraska, Colorado, Oregon?.

Palæolagus intermedius Matth.

- Matthew, W. D. 1899 A, p. 53.
 Oligocene (White River); Colorado.

Palæolagus leporinus (Cope).

- Cope, E. D. 1873 T, p. 5. (Tricium.)
 1873 CC, p. 4. (Tricium.)
 Oligocene (White River); Colorado.
 This is probably a synonym of *P. haydeni*. It
 was not recognized by Professor Cope after 1873;
 but I do not find that he referred it to any of
 his other species.

Palæolagus triplex Cope.

- Cope, E. D. 1873 T, p. 4.
 1873 CC, p. 4.
 1874 B, p. 479.
 1881 E, p. 384.
 1883 S, p. 173.
 1884 O, pp. 874, 881, pl. lxvi, fig. 28.

- Major, Fors. 1899 A, p. 443.
 Matthew, W. D. 1899 A, p. 53.
 Roger, O. 1896 A, p. 140.
 Trouessart, E. L. 1898 A, p. 648.
 Oligocene (White River); Colorado.

Palæolagus turgidus Cope.

- Cope, E. D. 1873 T, p. 4. (P. turgidus, Tricium
 paniense.)
 1873 CC, p. 4. (P. turgidus, Tricium pani-
 ense.)
 1874 B, p. 479. (P. turgidus, Tricium pani-
 ense.)
 1881 E, p. 384.
 1881 Q.
 1883 S, p. 173.
 1884 O, pp. 874, 882, pl. lxvi, fig. 28; pl. lxvii,
 figs. 13-27.
 1885 H.
 1886 U, p. 80.
 1889 I.
 1891 A, p. 5, pl. xiv, fig. 9.
 Lydekker, R. 1887 A, p. 326.
 Matthew, W. D. 1899 A, p. 52.
 Roger, O. 1896 A, p. 140.
 Trouessart, E. L. 1898 A, p. 848.
 Oligocene (White River); Colorado, western
 Canada.

PANOLAX Cope. Type *P. sanctæfidei* Cope.

- Cope, E. D. 1874 I, p. 151.
 1874 O, p. 17.
 1877 K, p. 295.
 1881 E, p. 381.
 1883 S, p. 173.
 Nicholson and Lydekker 1889 A, p. 1412.
 Zittel, K. A. 1893 B, p. 550.

Panolax sanctæfidei Cope.

- Cope, E. D. 1874 I, p. 151.

- Cope, E. D. 1874 O, p. 17.
 1875 F, p. 73.
 1877 K, p. 296, pl. lxix, figs. 16-22. (P. sanc-
 tæfidei.)
 1881 Q, p. 586.
 1883 S, p. 173.
 Matthew, W. D. 1899 A, p. 67.
 Roger, O. 1896 A, p. 140.
 Trouessart, E. L. 1898 A, p. 648.
 Miocene (Loup Fork); New Mexico.

LEPUS Linn. Type *L. timidus* Linn.

- Linnaeus, C., 1758, Syst. Nat., ed. 10, i, p. 57.
 Adloff, P. 1898 A, p. 392.
 Allen, J. A. 1877 A, ii, p. 282.
 Baird, S. F. 1857 A, p. 573.
 Cope, E. D. 1881 E, p. 384.
 1883 S, p. 173.
 1884 O, p. 885.
 1889 C, p. 269.
 Flower, W. H. 1885 A.
 Flower and Lydekker 1891 A, p. 492.
 Giebel, C. G. 1880 A.
 Hilgendorf, F. 1866 A, p. 673.
 Howes, G. B. 1896 A.
 Huxley, T. H. 1872 A, p. 371.
 Major, Fors. 1899 A, pp. 433, 463.
 Owen, R. 1866 B, pp. 364, 367, figs. 229, 233.
 Parker, W. K. 1868 A, p. 207, pl. xxv, figs. 1-5.
 Tones, J. 1850 A, p. 560.
 Trouessart, E. L. 1898 A, p. 649.
 Zittel, K. A. 1893 B, p. 550.

Lepus ennisianus Cope.

- Cope, E. D. 1881 E, p. 385.
 1881 Q.
 1883 S, p. 173, fig. 21.

- Cope, E. D. 1884 O, pp. 881, 886, pl. lxiv, fig. 11; pl.
 xlvi, fig. 29.
 Matthew, W. D. 1899 A, p. 62.
 Roger, O. 1896 A, p. 140.
 Trouessart, E. L. 1898 A, p. 649.
 Miocene (John Day); Oregon.

Lepus sylvaticus Bachm.

- Bachman, J., 1837, Jour. Acad. Nat. Sci., Phila.,
 vii, p. 403.
 Allen, J. A. 1877 A, ii, p. 327.
 Baird, S. F. 1857 A, p. 597, pl. lviii, fig. 1.
 Cope, E. D. 1869 E, p. 175.
 1871 I, p. 93.
 1899 A, p. 209.
 Holmes, F. S. 1858 B.
 Leidy, J. 1860 B, p. 113, pl. xxii, fig. 1.
 1862 A.
 1869 A, p. 403.
 1889 H, p. 6.
 Trouessart, E. L. 1898 A, p. 658.
 Wheatley, C. M. 1871 B.
 Recent; eastern United States. Pleistocene;
 Illinois, South Carolina, Pennsylvania, Vir-
 ginia.

ORDER INSECTIVORA.

- Allen, H. 1880 A.
 Baur, G. 1885 K, p. 459.
 Blainville, H. M. D. 1864 A, i, H, pls. i-xi.
 Cope, E. D. 1874 B, pp. 464, 472.
 1876 A.
 1877 K, pp. 85, 153.
 1880 B, p. 455.
 1883 I, p. 78.
 1884 O, pp. 185, 197, 739.
 1885 K.
 1887 S, p. 343.
 1888 D.
 1891 N, p. 72.
 1898 B, p. 115.
 Dobson, G. E. 1883 A.
 Flower, W. H. 1876 B, xiii, p. 514.
 1883 A.
 1883 D, p. 400.
 1885 A.
 Flower and Lydekker 1891 A, p. 610.
 Gadow H. 1898 A, p. 51.
 Gill, T. 1872 A, p. 303.
 1872 B, pp. 18, 49.
 1875 A.
 1883 B.
 Gill and Coues 1877 A, p. 1058.
 Haeckel, E. 1895 A, pp. 578, 580.
 Hay, O. P. 1899 F, p. 682.
 Huxley, T. H. 1870 A.
 1872 A, p. 375.
 Leche, W. 1880 A.
 1893 A.
 1896 A, p. 286.
 1897 A.
 1897 B.
 Leidy, J. 1871 C, p. 364.
 Lydekker, R. 1885 B, p. 14.
 1896 B.
 Marsh, O. C. 1877 E.
 Meyer, O. 1885 A, p. 229.
- Mivart, St. G. 1867 B.
 1867 C.
 1868 A.
 1871 A.
 Nicholson and Lydekker 1889 A, p. 1454.
 Osborn, H. F. 1888 G, p. 260.
 1893 D.
 1898 A, p. 146.
 1899 B, p. 94.
 1900 C, p. 566.
 Owen, R. 1843 A, p. 57.
 1845 B, p. 412.
 1866 B, p. 385.
 1868 A, p. 301.
 Parker, W. K. 1868 A, p. 210.
 1885 A, p. 125.
 1886 A.
 Parsons, F. G. 1899 A.
 1900 A.
 Paulli, S. 1900 B, p. 484.
 Pomel, A. 1848 C, p. 246.
 Ryder, J. A. 1878 A, p. 49.
 Schlosser, M. 1886 C.
 1887 B, p. 80.
 1888 A.
 1890 A.
 1890 C.
 1890 D.
 Scott, W. B. 1892 A, p. 422.
 Slade, D. D. 1888 A, p. 242.
 1892 A.
 Steinmann and Döderlein 1890 A, p. 709.
 Tomes, C. S. 1898 A, p. 481.
 Tornier, G. 1890 A.
 Trouessart, E. L. 1898 A, p. 166.
 Weyhe, — 1875 A, p. 104.
 Woodward, M. F. 1896 A.
 Wortman, J. L. 1886 A, p. 417.
 Zittel, K. A. 1893 B, pp. 557, 571, 727.

TALPIDÆ.

- Baird, S. F. 1857 A, p. 57.
 Bate, C. S. 1867 A, p. 377. (Genus Talpa.)
 Blainville, H. M. D. 1864 A, i, H, pls. i, v, vii, viii, ix. (Genus Talpa.)
 Cope, E. D. 1883 I, p. 80.
 Flower, W. H. 1883 D, p. 403.
 1885 A.
 Flower and Lydekker 1891 A, p. 628.
 Dobson, G. E. 1883 A, p. 126.
 Gill, T. 1872 B, p. 18.
 1875 A.
 Kober, J. 1882 A.
 1884 A.
 Leche, W. 1895 A, p. 50.
 Mivart, St. G. 1867 B.
- Mivart, St. G. 1867 C, i, p. 286; ii, p. 150.
 1871 A, p. 75.
 Moseley and Lankaster 1868 A.
 Nicholson and Lydekker 1889 A, p. 1458.
 Owen, R. 1868 A, p. 303.
 Parker, W. K. 1868 A, p. 210, pl. xxxvii, figs. 1-17.
 1885 B, p. 378.
 Pomel, A. 1848 C, p. 246. (Talpina.)
 Roger, O. 1896 A, p. 23.
 Schlosser, M. 1887 B, p. 125.
 Tomes, C. S. 1898 A, p. 491. (Genus Talpa.)
 Trouessart, E. L. 1898 A, p. 203.
 True, F. W. 1896 A, p. 18.
 Woodward, M. F. 1896 A, p. 575.
 Zittel, K. A. 1893 B, p. 563.

SCALOPS¹ Cuvier. Type *Sorex aquaticus* Linn.

- Baird, S. F. 1857 A, p. 58.
 Dobson, G. E. 1883 A, p. 159.
 Flower and Lydekker 1891 A, p. 630.
 Leche, W. 1895 A, p. 50.
 Mivart, St. G. 1867 B, p. 281.
 1867 C, i, p. 311; ii, p. 151.
 1871 A, p. 77.

- Owen, R. 1868 A, p. 303.
 True, F. W. 1896 A, pp. 7, 19.
 Zittel, K. A. 1893 B, p. 565.

Scalops sp. indet.

- Cope, E. D. 1871 I, p. 95.
 Pleistocene; Pennsylvania.

TALPAVUS Marsh. Type *T. nitidus* Marsh.

- Marsh, O. C. 1872 G, p. 128.
 1877 E.
 Nicholson and Lydekker 1889 A, p. 1458.
 Schlosser, M. 1887 B, p. 143.
 Zittel, K. A. 1893 B, p. 564.

Talpavus nitidus Marsh.

- Marsh, O. C. 1872 G, p. 128.

- King, C. 1878 A, p. 403.
 Matthew, W. D. 1899 A, p. 42.
 Roger, O. 1896 A, p. 23.
 Trouessart, E. L. 1898 A, p. 208.
 Eocene (Bridger); Wyoming.

SORICIDÆ.

- Baird, S. F. 1857 A, p. 7.
 Blainville, H. M. D. 1864 A, i, H, pls. ii, v, vii, viii, ix, x. (Genus *Sorex*.)
 Brandt, E. 1868 A, p. 76, pls i-vi. (Genus *Sorex*.)
 1870 A, p. 1. (Genus *Sorex*.)
 Flower, W. H. 1883 D, p. 403.
 Flower and Lydekker 1891 A, p. 621.
 Gervais, P. 1859 A, p. 54.
 Giebel, C. G. 1852 A, p. 222. ("Spitzmäuse.")
 Gill, T. 1872 B, p. 18.
 1875 A.
 Gill and Coues 1877 A, p. 1058.
 Leche, W. 1895 A, p. 47.

- Merriam, C. H. 1895 C.
 Mivart, St. G. 1867 C, p. 289. (Genus *Sorex*.)
 Nicholson and Lydekker 1889 A, p. 1457.
 Owen, R. 1868 A, p. 305.
 Parker, W. K. 1868 A, p. 210, pl. xxviii, fig. 1-7.
 1885 B, p. 378.
 Peters, W. 1852 A, p. 220. ("Spitzmäuse.")
 Pomel, A. 1848 C, p. 248. ("Soriciens.")
 Roger, O. 1896 A, p. 25.
 Schlosser, M. 1887 B, p. 120.
 Wortman, J. L. 1886 A, p. 426.
 Zittel, K. A. 1893 B, p. 567.

PROTOSOREX Scott. Type *P. crassus* Scott.

- Scott, W. B. 1894 A, p. 446.

Protosorex crassus Scott.

- Scott, W. B. 1894 A, p. 446.

- Matthew, W. D. 1899 A, p. 55.
 Roger, O. 1896 A, p. 25.
 Trouessart, E. L. 1898 A, p. 186.
 Oligocene (White River); South Dakota.

BLARINA Gray. Type *Sorex talpoides* Gapper=*S. brevicaudus* Say.

- Gray, J. E., 1837, Proc. Zool. Soc. Lond., p. 124.
 Baird, S. F. 1857 A, p. 36.
 Merriam, C. H. 1895 B, pp. 5, 9.
 For synonymy of this genus see Merriam as quoted.

- Blarina simplicidens** Cope.
 Cope, E. D. 1899 A, p. 219, text figure.
 Pleistocene; Pennsylvania.

LEPTICTIDÆ.

- Cope, E. D. 1882 E, pp. 156, 157.
 1884 O, p. 259.
 1884 S, p. 347.
 1886 L, p. 966.
 Gill, T. 1872 B, p. 19.
 Matthew, W. D. 1899 A, p. 55.
 Nicholson and Lydekker 1889 A, p. 1459.

- Roger, O. 1896 A, p. 22. (Ictopsidæ.)
 Schlosser, M. 1886 C.
 1887 B, p. 140. (Ictopsidæ.)
 Steinmann and Döderlein 1890 A, p. 710. (Ictopsidæ.)
 Trouessart, E. L. 1898 A, p. 216. (Ictopsidæ.)
 Zittel, K. A. 1893 B, p. 561. (Ictopsidæ.)

¹*Scalops aquaticus* has been reported by Dr. Leidy (1889 H, p. 5) from a cave in Pennsylvania in which a very large proportion of the animals found belong to species yet living in the vicinity.

Ictrops Leidy. Type *I. dakotensis* Leidy.*Leidy, J.* 1868 J, p. 316.

Cope, E. D. 1881 D, p. 192.

1882 E, p. 157.

1884 O, pp. 259, 265, 801.

1884 S, pp. 352, 478.

Leidy, J. 1871 C, p. 364.

Schlosser, M. 1887 B, p. 141.

Scott, W. B. 1892 A, p. 422.

Trouessart, E. L. 1898 A, p. 216.

Zittel, K. A. 1893 B, p. 216.

Ictrops bullatus Matth.*Matthew, W. D.* 1899 A, p. 55.

Oligocene (White River); South Dakota.

Ictrops dakotensis Leidy.*Leidy, J.* 1868 J, p. 316.

Cope, E. D. 1884 O, pp. 266, 800.

King, C. 1878 A, p. 412.

Leidy, J. 1869 A, pp. 351, 408, pl. xxvi.

1871 C, p. 364.

Matthew, W. D. 1899 A, p. 55.

Roger, O. 1896 A, p. 22.

Scott, W. B. 1892 A, p. 423.

Trouessart, E. L. 1898 A, p. 216.

Oligocene (White River); South Dakota.

Ictrops didelphoides Cope.*Cope, E. D.* 1881 D, p. 192.

1884 O, p. 268, pl. xxva, fig. 9.

Matthew, W. D. 1899 A, p. 35. (Palæictops?).

Roger, O. 1896 A, p. 22.

Schlosser, M. 1887 B, p. 142.

Trouessart, E. L. 1898 A, p. 216.

Eocene (Wind River); Wyoming.

PALÆICTOPS Matth. Type *Ictops bicuspis* Cope.*Matthew, W. D.* 1899 A, p. 31.**Palæictops bicuspis** (Cope).*Cope, E. D.* 1880 N, p. 746. (Stypolophus.)

1881 D, p. 192. (Ictops.)

1882 E, p. 160. (Ictops.)

1884 O, p. 266, pl. lviii f, figs. 2, 3. (Ictops.)

Cope, E. D. 1884 S, p. 478, fig. 21. (Ictops.)

Matthew, W. D. 1899 A, p. 31.

Roger, O. 1896 A, p. 22. (Ictops.)

Trouessart, E. L. 1898 A, p. 216. (Ictops.)

Zittel, K. A. 1893 B, p. 561, fig. 470. (Ictops.)

Eocene (Wasatch); Wyoming.

LEPTICTIS Leidy. Type *L. haydeni* Leidy.*Leidy, J.* 1868 J, p. 315.

Bruce, A. T. 1883 A, p. 43, fig. 9.

Cope, E. D. 1874 B, p. 472.

1882 E, p. 157.

1884 O, pp. 260, 801.

1884 S, p. 352.

1886 L, p. 966.

Leidy, J. 1871 C, p. 364.

Schlosser, M. 1887 B, p. 141.

Scott, W. B. 1892 A, p. 422.

Wortman, J. L. 1893 A.

Zittel, K. A. 1893 B, p. 562.

Leptictis haydeni Leidy.*Leidy, J.* 1868 J, p. 315.

Cope, E. D. 1884 O, p. 800.

1884 S, p. 478, fig. 22.

King, C. 1878 A, p. 412.

Leidy, J. 1869 A, pp. 345, 408, pl. xxvi, figs. 25-28.

1871 C, p. 364.

Matthew, W. D. 1899 A, p. 55.

Roger, O. 1896 A, p. 22.

Schlosser, M. 1887 B, p. 141.

Zittel, K. A. 1893 B, p. 562, fig. 471.

Oligocene (White River); South Dakota.

MESODECTES Cope. Type *M. caniculus* Cope.*Cope, E. D.* 1875 C, p. 30.

1873 T, p. 3. (Isacis, preoccupied.)

1873 CC, p. 5. (Isacis.)

1874 B, pp. 465, 470. (Isacis.)

1882 E, p. 157.

1884 O, pp. 259, 788, 801.

1884 S, p. 352.

Matthew, W. D. 1899 A, p. 55.

Scott, W. B. 1892 A, p. 423.

Zittel, K. A. 1893 B, p. 562.

Mesodectes caniculus Cope.*Cope, E. D.* 1873 T, p. 3. (Isacis.)

1873 CC, p. 8. (Isacis.)

1874 B, p. 473. (Isacis.)

1874 P, p. 23. (Isacis.)

1884 O, p. 805, pl. lxii, figs. 33-50.

1884 S, p. 478.

Matthew, W. D. 1899 A, p. 55.

Roger, O. 1896 A, p. 22.

Trouessart, E. L. 1898 A, p. 216.

Oligocene (White River); Colorado.

GEOLABIS Cope. Type *G. rhynchæus* Cope.*Cope, E. D.* 1884 O, p. 807.

Schlosser, M. 1887 B, p. 142.

Zittel, K. A. 1893 B, p. 562.

Geolabis rhynchæus Cope.*Cope, E. D.* 1884 O, p. 808, pl. lxii, figs. 30-32.

Cope, E. D. 1874 B, p. 479, fig. 22. (Domnina sp.)

Matthew, W. D. 1899 A, p. 55.

Roger, O. 1896 A, p. 22.

Trouessart, E. L. 1898 A, p. 217.

Oligocene (White River); Colorado.

DIACODON Cope. Type *D. alticuspis* Cope.

Cope, E. D. 1875 C, p. 11.

1876 A, p. 3.

1877 K, p. 133.

1882 E, p. 157.

1884 O, pp. xxxv, 260, 713.

1884 S, p. 349.

Schlosser, M. 1887 B, p. 142. (Syn. of *Centetodon* Marsh.)

Zittel, K. A. 1893 B, p. 562.

Diacodon alticuspis Cope.

Cope, E. D. 1875 C, p. 12.

1877 K, p. 132, pl. xlv, fig. 19.

1884 S, p. 350, fig. 18a.

Matthew, W. D. 1899 A, p. 31.

Roger, O. 1896 A, p. 22.

Trouessart, E. L. 1898 A, p. 217.

Eocene (Wasatch); New Mexico.

Diacodon celatus Cope.

Cope, E. D. 1875 C, p. 12.,

1877 K, p. 133, pl. xlv, fig. 20.

1884 S, p. 350, fig. 18b.

Matthew, W. D. 1899 A, p. 31.

Roger, O. 1896 A, p. 22.

Trouessart, E. L. 1898 B, p. 217.

Eocene (Wasatch); New Mexico.

CENTETODON Marsh. Type *C. pulcher* Marsh.

Marsh, O. C. 1872 I, p. 209.

Schlosser, M. 1887 B, p. 144.

Zittel, K. A. 1893 B, p. 362.

Centetodon altidens Marsh.

Marsh, O. C. 1872 I, p. 214.

Matthew, W. D. 1899 A, p. 41.

Roger, O. 1896 A, p. 23.

Trouessart, E. L. 1898 A, p. 217.

Eocene (Bridger); Wyoming.

Centetodon pulcher Marsh.

Marsh, O. C. 1872 I, p. 209.

King, C. 1878 A, p. 403.

Matthew, W. D. 1899 A, p. 41.

Roger, O. 1896 A, p. 22.

Trouessart, E. L. 1898 A, p. 217.

Eocene (Bridger); Wyoming.

PASSALACODON Marsh. Type *P. litoralis* Marsh.

Marsh, O. C. 1872 I, p. 208.

Schlosser, M. 1887 B, p. 143.

Zittel, K. A. 1887 B, p. 562.

Passalacodon litoralis Marsh.

Marsh, O. C. 1872 I, p. 208.

King, C. 1878 A, p. 403.

Matthew, W. D. 1899 A, p. 42.

Roger, O. 1896 A, p. 23.

Trouessart, E. L. 1898 B, p. 217.

Eocene (Bridger); Wyoming.

ANISACODON Marsh. Type *A. elegans* Marsh.

Marsh, O. C. 1872 I, p. 209.

Schlosser, M. 1887 B, p. 143.

Zittel, K. A. 1893 B, pp. 304, 308, 562.

Anisacodon elegans Marsh.

Marsh, O. C. 1872 I, p. 209.

Matthew, W. D. 1899 A, p. 42.

Roger, O. 1896 A, p. 23.

Trouessart, E. L. 1898 A, p. 217.

Eocene (Bridger); Wyoming.

CENTRACODON Marsh. Type *C. delicatus* Marsh.

Marsh, O. C. 1872 I, p. 215.

Schlosser, M. 1887 B, p. 143.

A genus of uncertain position.

Centracodon delicatus Marsh.

Marsh, O. C. 1872 I, p. 215.

Matthew, W. D. 1899 A, p. 42.

Roger, O. 1896 A, p. 23.

Trouessart, E. L. 1898 A, p. 218.

Eocene (Bridger); Wyoming.

ENTOMODON Marsh. Type *E. comptus* Marsh.

Marsh, O. C. 1872 I, p. 214.

Schlosser, M. 1887 B, p. 143.

Zittel, K. A. 1893 B, p. 562.

Entomodon comptus Marsh.

Marsh, O. C. 1872 I, p. 214.

Matthew, W. D. 1899 A, p. 42.

Roger, O. 1896 A, p. 23.

Trouessart, E. L. 1898 A, p. 218.

Eocene (Bridger); Wyoming.

ENTOMACODON. Type *E. minutus* Marsh.

Marsh, O. C. 1872 I, p. 214.
1877 E.

Schlosser, M. 1887 B, p. 143.

Zittel, K. A. 1893 B, p. 562.

Entomacodon angustidens Marsh.

Marsh, O. C. 1872 I, p. 214.

King, C. 1878 A, p. 403.

Matthew, W. D. 1899 A, p. 42.

Roger, O. 1896 A, p. 23.

Trouessart, E. L. 1898 A, p. 218.

Eocene (Bridger); Wyoming.

Entomacodon minutus Marsh.

Marsh, O. C. 1872 I, p. 222.

Matthew, W. D. 1899 A, p. 42.

Roger, O. 1896 A, p. 23.

Schlosser, M. 1887 B, p. 143.

Trouessart, E. L. 1898 A, p. 218.

Eocene (Bridger); Wyoming.

EURYACODON Marsh. Type *E. lepidus* Marsh.

Marsh, O. C. 1872 I, p. 223.

Schlosser, M. 1887 B, p. 218.

Euryacodon lepidus Marsh.

Marsh, O. C. 1872 I, p. 223.

Matthew, W. D. 1899 A, p. 42.

Roger, O. 1896 A, p. 23.

Trouessart, E. L. 1898 A, p. 218.

Eocene (Bridger); Wyoming.

ANOMODON Le Conte. Type *A. snyderi* Le Conte.

Le Conte, J. L. 1848 A, p. 106.

The position of this genus is doubtful. Roger and Trouessart (*loc. cit. infra*) assigned it to the Erinaceidæ.

Anomodon snyderi Le Conte.

Le Conte, J. L. 1848 A, p. 106, fig. 3.

Cope, E. D. 1869 E, p. 175.

Leidy, J. 1856 T, p. 171, pl. xvii, figs. 25, 26.

1862 A.

1869 A, p. 408.

1870 H, p. 13.

Pictet, F. J. 1853 A, p. 179.

Roger, O. 1896 A, p. 27.

Trouessart, E. L. 1898 A, p. 178.

Pleistocene; northern Illinois.

DOMNINA Cope. Type *D. gradata* Cope.

Cope, E. D. 1873 T, p. 1.

1873 CC, p. 4 (Domnina); p. 5 (Miothen, type *M. crassigenis*).

1874 B, pp. 465, 469, 470.

1884 O, pp. 788, 810.

Matthew, W. D. 1899 A, p. 55.

Nicholson and Lydekker 1889 A, p. 1463.

Schlosser, M. 1887 D, p. 78.

Zittel, K. A. 1893 B, p. 562 (Syn.? of *Geolabis*); p. 578.

The relationships of this genus are doubtful.

Domnina crassigenis Cope.

Cope, E. D. 1873 CC, p. 8. (Miothen.)

1874 B, p. 470.

Cope, E. D. 1884 O, p. 811, pl. lxii, figs. 24-29.

Matthew, W. D. 1899 A, p. 55.

Roger, O. 1896 A, p. 30.

Trouessart, E. L. 1898 A, p. 106.

Oligocene (White River); Colorado.

Domnina gradata Cope.

Cope, E. D. 1873 T, p. 1.

1873 CC, p. 8.

1874 B, p. 469.

1884 O, p. 810, pl. lxii, figs. 25, 26.

Matthew, W. D. 1899 A, p. 55.

Roger, O. 1896 A, p. 30.

Trouessart, E. L. 1898 A, p. 106.

Oligocene (White River); Colorado.

Order CHIROPTERA.

Allen, H. 1880 A.

1882 A.

1886 A.

1893 A.

Blainville, H. M. D. 1864 A, i, G, pls. i-xv.

Cope, E. D. 1873 E, p. 644.

1880 B, p. 455.

1884 O, p. 167.

1888 D, p. 255.

1889 C, p. 143.

1889 R, pp. 875, 876.

Dobson, G. E. 1878 A.

Flower, W. H. 1876 B, xiii, p. 514.

1883 A.

1883 D, p. 405.

1885 A.

Flower and Lydekker 1891 A, p. 641.

Gadow, H. 1898 A, p. 52.

Gill, T. 1872 A, p. 302.

1872 B, pp. 16, 49.

Gill and Coues 1877 A, p. 1055.

Gruber, W. 1859 A.

Haeckel, E. 1895 A, pp. 593, 595.

Hay, O. P. 1899 F, p. 682.

Huxley, T. H. 1870 A, p. 440.

1872 A, p. 385.

Leboucq, H. 1896 A.

Leche, W. 1877 A.

1895 A, p. 74.

Lydekker, R. 1896 B.

Marsh, O. C. 1877 E.

Nicholson and Lydekker 1889 A, p. 1459.

- Osborn, H. F. 1893 A, p. 387.
1893 D, p. 12.
Owen, R. 1843 A, p. 56.
1845 B, p. 424.
Parker, W. K. 1868 A, p. 214.
1885 A, p. 188.
1886 A.
Roger, O. 1896 A, p. 28.
Ryder, J. A. 1878 A, p. 48.
Schlosser, M. 1887 B, p. 55.

- Schlosser, M. 1889 A.
1890 A.
1890 C, p. 269.
Slade, D. D. 1888 A, p. 242.
Tomes, C. S. 1898 A, p. 496.
Trouessart, E. L. 1898 A, p. 77.
Weyhe, — 1875 A, p. 102.
Winge, H. 1893 A.
1893 B.
Zittel, K. A. 1893 B, pp. 572, 729.

VESPÉRTILIONIDÆ.

- Allen, H. 1893 A, p. 53.
Blainville, H. M. D. 1864 A, i, G, p. 71.
Flower, W. H. 1883 D, p. 410.
Flower and Lydekker 1891 A, p. 660.
Miller, G. S. 1897 A.
Nicholson and Lydekker 1889 A, p. 1461.

- Roger, O. 1896 A, p. 28.
Trouessart, E. L. 1898 A, p. 103.
Winge, H. 1893 A, p. 34.
1893 B, p. 82.
Zittel, K. A. 1893 B, p. 577.

PIPISTRELLUS Kaup. Type *Vespertilio pipistrellus* Schreber.

- Allen, H. 1893 A, p. 121. (Vesperugo.)
Cope, E. D. 1884 O, p. 373. (Vesperugo.)
Dobson, G. E. 1878 A, p. 183. (Vesperugo, part.)
Flower and Lydekker 1891 A, p. 661. (Vesperugo, part.)
Miller, G. S. 1897 A, p. 87. (Pipistrellus.)
Nicholson and Lydekker 1889 A, p. 1461. (Vesperugo.)
Zittel, K. A. 1893 B, p. 578. (Vesperugo.)

Pipistrellus anemophilus (Cope).

- Cope, E. D.* 1880 N, p. 745. (Vesperugo.)
1881 D, p. 184. (Vesperugo.)
1884 O, p. 374. (Vesperugo.)
Matthew, W. D. 1899 A, p. 35. (Vesperugo.)
Roger, O. 1896 A, p. 29. (Vesperugo.)
Trouessart, E. L. 1898 A, p. 115. (Vesperugo.)
Eocene (Wind River); Wyoming.

VESPÉRTILIO Linn. Type *V. murinus* Linn.

- Linnæus, C.*, 1858, Syst. Nat., ed. 10, i, p. 31.
Allen, H. 1893 A, p. 111. (Adelonycteris.)
Dobson, G. E. 1878 A, p. 183. (Vesperugo, part.)
Flower and Lydekker 1891 A, p. 661. (Vesperugo, in part.)
Miller, G. S. 1897 A, p. 95.

Vespertilio fuscus Beauvois.

- Beauvois*, 1796, Cat. Peale's Mus., p. 14.
Allen, H. 1893 A, p. 112. (Adelonycteris.)

- Dobson, G. E. 1878 A, p. 193. [Vesperugo (Vesperus).]
Leidy, J. 1889 H, p. 51.
Mercer, C. H. 1897 A. (Adelonycteris.)
Miller, G. S. 1897 A, p. 96, fig. 24, b.
Trouessart, E. L. 1898 A, p. 106. [Vesperugo (Vesperus).]
Recent; Georgia to California and northward.
Pleistocene?; cave in Tennessee.

NYCTITHERIUM Marsh. Type *N. velox* Marsh.

- Marsh, O. C.* 1872 G, p. 127.
1877 E.
Miller, G. S. 1897 A, p. 16.
Nicholson and Lydekker 1889 A, p. 1461. (Syn. of Vesperugo.)
Zittel, K. A. 1893 B, p. 578.

Nyctitherium priscum Marsh.

- Marsh, O. C.* 1872 G, p. 128.
King, C. 1878 A, p. 403.
Matthew, W. D. 1899 A, p. 42.
Miller, G. S. 1897 A, p. 33.

- Trouessart, E. L. 1898 A, p. 106.
Eocene (Bridger); Wyoming.

Nyctitherium velox Marsh.

- Marsh, O. C.* 1872 G, p. 127.
King, C. 1878 A, p. 403.
Matthew, W. D. 1899 A, p. 42.
Miller, G. S. 1897 A, p. 37.
Roger, O. 1896 A, p. 30.
Trouessart, E. L. 1898 A, p. 106.
Eocene (Bridger); Wyoming.

NYCTILESTES Marsh. Type *N. serotinus* Marsh.

- Marsh, O. C.* 1872 I, p. 215.
1877 E.
Miller, G. S. 1897 A, p. 16.
Nicholson and Lydekker 1889 A, p. 1461.
Zittel, K. A. 1893 B, p. 578.

Nyctilestes serotinus Marsh.

- Marsh, O. C.* 1872 I, p. 215.

- King, C. 1878 A, p. 403.
Matthew, W. D. 1899 A, p. 42.
Miller, G. S. 1897 A, p. 35.
Roger, O. 1896 A, p. 30.
Trouessart, E. L. 1898 A, p. 106.
Eocene (Bridger); Wyoming.

¹ *V. subulatus* has been reported by Dr. Leidy (loc. cit.) from the same cave.

Order FERÆ Linnaeus.

Linnaeus, C., 1758, Syst. Nat., ed. 10, i, p. 37.

Unless otherwise indicated, the following authors apply the name *Carnivora* to this order.

- Albrecht, P. 1879 A.
 Allen, J. A. 1880 A.
 Ameghino, F. 1889 A, p. 295.
 Baird, S. F. 1857 A, p. 78.
 Baur, G. 1890 B.
 Blainville, H. M. D. 1864 A, ii, with 117 plates.
 Cope, E. D. 1873 E, p. 646.
 1875 C, p. 25.
 1876 A.
 1879 G.
 1880 B, p. 455.
 1881 J, p. 545.
 1884 E.
 1884 O, pp. 263, 888.
 1887 S, pp. 264, 343.
 1888 D.
 1888 I, p. 6.
 1889 C.
 1889 R, p. 875.
 Cuvier, G. 1834 A, v, p. 486; vii.
 Filhol, H. 1883 A.
 Flower, W. H. 1869 A, p. 269.
 1869 B, p. 4.
 1876 B, xiii, p. 487.
 1883 D, p. 432.
 1885 A.
 Flower and Lydekker 1891 A, p. 496.
 Gadow, H. 1898 A, p. 50.
 Gill, T. 1872 A, p. 297. (Feræ.)
 1872 B, pp. 47, 56. (Feræ.)
 Gaudry, A. 1878 B, p. 209.
 Gray, J. E. 1869 A, p. 2.
 Gruber, W. 1859 A.
 Haeckel, E. 1895 S, pp. 578, 584.
 Hay, O. P. 1899 F, p. 682.
 Humphreys, J. 1889 A, p. 142.
 Huxley, T. H. 1872 A, p. 350.

- Kittl, E. 1887 A.
 Kollmann, J. 1888 A.
 Lydekker, R. 1885 B, p. 20.
 1896 B.
 Marsh, O. C. 1877 E.
 Mivart, St. G. 1881 A, p. 473.
 Osborn, H. F. 1900 C, p. 568.
 1892 I.
 Owen, R. 1845 B, p. 473.
 1851 C, p. 729.
 1866 B, p. 487.
 1868 A, p. 327.
 Parker, W. K. 1868 A, p. 215.
 1885 A, p. 198.
 Parsons, F. G. 1899 A.
 1900 A.
 Pauli, S. 1900 B, p. 489.
 Scheidt, P. 1894 A.
 Schlosser, M. 1886 C.
 1888 B.
 1889 A.
 1890 A.
 1890 C.
 1890 D.
 1892 A, p. 217.
 Scott, W. B. 1888 A.
 1892 A, p. 424.
 Slade, D. D. 1888 A, p. 243.
 Steinmann and Döderlein 1890 A, p. 716.
 Tims, H. W. M. 1896 B, p. 461.
 Tomes, C. S., 1898 A, p. 459.
 Turner, H. N. 1848 A.
 Waterhouse, G. R. 1839 A.
 Weber, M. 1886 A, p. 227.
 Weyhe, — 1875 A, p. 116.
 Winge, H. 1895 B. (*Carnivora vera*.)
 Woodward, A. S. 1895 H, p. 380.
 Wortman, J. L. 1886 A, p. 448.
 Wortman and Matthew 1899 A, p. 109.
 Zittel, K. A. 1893 B, pp. 578, 606, 678, 731.

Suborder CREODONTA Cope.

- Cope*, E. D. 1876 A, p. 3.
 Ameghino, F. 1889 A, pp. 285, 293.
 1891 C, p. 214.
 Cope, E. D. 1875 C, p. 23. (*Bunotheriidae*, in part.)
 1876 E. (*Bunotheria*, in part.)
 1877 K, p. 72 (*Bunotheria*, in part); pp. 85, 87 (*Creodonta*).
 1877 S. (*Bunotheria*, in part.)
 1880 C.
 1881 S.
 1882 E, p. 156.
 1883 I (*Bunotheria*, in part); p. 78 (*Creodonta*).
 1884 E.
 1884 L.
 1884 O, pp. 185, 251, 738 (*Creodonta*); pp. 167, 185, 737, 800 (*Bunotheria*, in part).
 1884 S.
 1885 U.
 1886 L.
 1887 M.
 1887 S, p. 343.
 Cope, E. D. 1888 D.
 1888 K.
 1888 CC, p. 308.
 1889 C. (*Bunotheria*, in part; *Creodonta*.)
 1889 R. (*Bunotheria*, in part; *Creodonta*.)
 1891 N, p. 72. (*Bunotheria*, in part; *Creodonta*.)
 1898 B, p. 114 (*Creodonta*); pp. 105, 114 (*Bunotheria*).
 Earle, C. 1898 A, p. 261.
 Flower and Lydekker 1891 A, p. 606.
 Gadow, H. 1898 A, p. 50.
 Hay, O. P. 1899 F, p. 682.
 Ihering, H. 1891 A, p. 209.
 Lemoine, V. 1880 A, p. 586.
 Lydekker, R. 1885 E, p. 471.
 1887 A, p. viii. (*Bunotheria*, in part.)
 1900 A, p. 924.
 Matthew, W. D. 1899 A, p. 28.
 Nicholson and Lydekker 1889 A, p. 1449.
 Osborn, H. F. 1888 F.
 1892 I.

Osborn, H. F. 1893 D.

1894 A, p. 236. (Bunotheria, in part.)

1898 A, p. 146.

1898 H, p. 174.

1899 B, p. 93.

1900 C, p. 567.

Osborn and Wortman 1892 A, p. 103.

Roger, O. 1896 A, p. 30.

Rütimeyer, L. 1888 A.

1891 A, p. 93.

Schlosser, M. 1886 C.

1887 A.

1887 B, p. 162.

1888 A, p. 584.

1889 A.

1890 A.

1890 C.

1890 D.

Schlosser, M. 1892 A.

Scott, W. B. 1888 B.

1890 A.

1891 B, p. 366.

1892 A, p. 418.

1892 B.

1892 D.

1895 F, p. 719.

Slade, D. D. 1890 A.

Steinmann and Döderlein 1890 A, p. 711.

Trouessart, E. L. 1898 A, p. 219.

Winge, H. 1895 B, p. 46. (Carnivora primitiva.)

Woodward, A. S. 1898 B, p. 380.

Wortman, J. L. 1885 A, p. 298. (Bunotheria, in part; Creodonta.)

Wortman and Matthew 1899 A, p. 109.

Zittel, K. A. 1893 B, pp. 579, 605, 725.

OXYCLÆNIDÆ.

Scott, W. B. 1892 B, p. 294.

Earle, C. 1898 A, p. 261. (Chriacidæ.)

Matthew, W. D. 1897 C, p. 265 (Chriacidæ); p. 267 (Oxyclænidae.)

1899 A, pp. 28, 29.

Osborn and Earle 1895 A, p. 20.

Roger, O. 1896 A, p. 32.

Scott, W. B. 1892 D, p. 77.

Trouessart, E. L. 1898 A, p. 219. (Includes Chriacidæ.)

Zittel, K. A. 1893 B, p. 584.

OXYCLÆNUS Cope. Type *Mioclænus cuspidatus* Cope.

Cope, E. D. 1884 K, p. 312.

1888 CC, p. 320, footnote.

Matthew, W. D. 1897 C, pp. 268, 276.

Scott, W. B. 1892 A, p. 419.

1892 B, p. 295.

1892 D, p. 77.

Zittel, K. A. 1893 B, p. 584.

Oxyclænus cuspidatus Cope.

Cope, E. D. 1884 K, p. 312. (Mioclænus, Oxyclænus.)

1888 CC, p. 321. (Mioclænus.)

Matthew, W. D. 1897 C, p. 276.

1899 A, p. 28.

Osborn and Earle 1895 A, p. 23. (Protochriacus simplex?).

Roger, O. 1896 A, p. 32.

Scott, W. B. 1892 B, p. 295.

Trouessart, E. L. 1898 A, p. 219.

Eocene (Puerco); New Mexico.

Oxyclænus simplex Cope.

Cope, E. D. 1884 K, pp. 314, 315. (Chriacus.)

1888 CC, p. 336. (Chriacus.)

Matthew, W. D. 1897 C, p. 277, fig. 8.

1899 A, p. 28.

Roger, O. 1896 A, p. 249. (Protochriacus.)

Scott, W. B. 1892 B, p. 296. (Protochriacus.)

Eocene (Puerco); New Mexico.

CHRIACUS Cope. Type *Pelycodus pelvidens* Cope.

Cope, E. D. 1883 I, p. 80.

1884 K, p. 312.

1884 O, p. 740.

1884 S, p. 352.

1888 CC, p. 336.

Earle, C. 1898 A, p. 261.

Matthew, W. D. 1897 C, p. 272.

Osborn and Earle 1895 A, p. 21.

Schlosser, M. 1887 B, p. 49.

Scott, W. B. 1892 A, p. 421, fig. 4.

1892 B, p. 295 (Chriacus); p. 296 (Epichriacus, type *C. schlosserianus*).

1892 D, p. 77.

Steinmann and Döderlein 1890 A, p. 712.

Zittel, K. A. 1893 B, p. 585. (Chriacus, Epichriacus.)

Chriacus angulatus Cope.

Cope, E. D. 1875 C, p. 14. (Pelycodus.)

1877 K, p. 144, pl. xxxix, fig. 15. (Tomitherium.)

1882 E, p. 151. (Pelycodus.)

1883 I, p. 80. (Chriacus.)

1884 K, p. 314.

1884 O, pp. 225, 231, pl. xxivd, fig. 4 (Pelycodus); p. 740 (Chriacus).

1884 S, p. 353, fig. 14.

Matthew, W. D. 1899 A, p. 30. (Pelycodus.)

Roger, O. 1896 A, p. 250.

Scott, W. B. 1892 B, p. 296.

Trouessart, E. L. 1898 A, p. 220.

Eocene (Wasatch); New Mexico, Wyoming.

Chriacus baldwini Cope.

- Cope, E. D.* 1882 C, p. 463. (Deltatherium.)
 1884 K, p. 314, in part. (C. pelvidens.)
 1884 O, p. 282, pl. xxiiid, fig. 12 (Deltatherium); p. 225, in part, pl. xxivd, fig. 3 (Pelycodus pelvidens).
 1888 CC, pp. 304, 340, in part (C. baldwini); p. 304, in part (C. pelvidens).
Matthew, W. D. 1897 C, pp. 268, 274, figs. 5, 6.
 1899 A, p. 29.
Osborn and Earle 1895 A, p. 21.
Roger, O. 1896 A, p. 250.
Scott, W. B. 1892 B, p. 296.
Trouessart, E. L. 1898 A, p. 220.
 Eocene (Torrejon); New Mexico.

Chriacus pelvidens Cope.

- Cope, E. D.* 1881 Z, p. 1019. (Lipodectes.)
 1882 C, p. 462. (Pelycodus.)
 1882 E, p. 151. (Pelycodus.)
 1883 I, p. 80.
 1884 K, p. 313, part.
 1884 O, p. 225, in part (Pelycodus); p. 740 (Chriacus).
 1888 CC, pp. 304, 336, in part.
Matthew, W. D. 1897 C, pp. 263, 273, fig. 4.
 1899 A, p. 29.
Roger, O. 1896 A, p. 250.
Trouessart, E. L. 1898 A, p. 220.
 Eocene (Torrejon); New Mexico.

PENTACODON Scott. Type *Chriacus inversus* Cope.

- Scott, W. B.* 1892 B, p. 296.
 1892 D, p. 77.
Zittel, K. A. 1893 B, p. 585.

Pentacodon inversus (Cope).

- Cope, E. D.* 1888 CC, p. 342. (Chriacus.)

LOXOLOPHUS Cope. Type *L. adapius* Cope=*Chriacus hyattianus* Cope.

- Cope, E. D.* 1885 J, p. 386.
Hay, O. P. 1899 A, p. 593.
Matthew, W. D. 1897 C, p. 268. (Protochriacus.)
Osborn and Earle 1895 A, p. 22.
Scott, W. B. 1892 B, p. 296 (Protochriacus, type *P. priscus*); p. 297 (Loxolophus).
 1892 D, p. 77. (Protochriacus, Loxolophus.)
Zittel, K. A. 1893 B, p. 585. (Protochriacus, Loxolophus.)

Loxolophus attenuatus (Osb. and Earle).

- Osborn and Earle* 1895 A, p. 22. (Protochriacus.)
Matthew, W. D. 1897 C, pp. 263, 269. (Protochriacus.)
 1899 A, p. 28.
Roger, O. 1896 A, p. 249. (Protochriacus.)
Trouessart, E. L. 1898 A, p. 220. (Protochriacus.)
 Eocene (Puerco); New Mexico.

Loxolophus hyattianus (Cope).

- Cope, E. D.* 1885 J, p. 385 (Chriacus hyattianus); p. 386 (*L. adapius*).

Chriacus schlosserianus Cope.

- Cope, E. D.* 1888 CC, p. 338.
Matthew, W. D. 1897 C, pp. 263, 268, 275.
 1899 A, p. 29.
Roger, O. 1896 A, p. 249. (Epichriacus.)
Scott, W. B. 1892 A, p. 421. (Epichriacus.)
 1892 B, p. 296. (Epichriacus.)
 1892 D, p. 77. (Epichriacus.)
Trouessart, E. L. 1898 A, p. 220. (Epichriacus.)
 Eocene (Torrejon); New Mexico.

Chriacus stenops Cope.

- Cope, E. D.* 1888 CC, p. 341.
Matthew, W. D., 1899 A, p. 29. (Syn. of *C. pelvidens*.)
Roger, O. 1896 A, p. 250.
Scott, W. B. 1892 A, p. 421.
 1892 B, p. 296.
Trouessart, E. L. 1898 A, p. 220.
 Eocene (Torrejon); New Mexico.

Chriacus truncatus Cope.

- Cope, E. D.* 1884 K, p. 313.
 1888 CC, pp. 304, 336, fig. 8.
Matthew, W. D. 1897 C, pp. 263, 275, fig. 7.
 1899 A, p. 29.
Roger, O. 1896 A, p. 250.
Trouessart, E. L. 1898 A, p. 220.
 Eocene (Torrejon); New Mexico.

- Roger, O.* 1896 A, p. 250.
Scott, W. B. 1892 B, p. 297.
Trouessart, E. L. 1898 A, p. 220.
 Eocene (Puerco); New Mexico.

- Cope, E. D.* 1888 CC, pp. 304, 336. (Chriacus.)
Matthew, W. D. 1897 C, pp. 263, 268, 269, fig. 2. (Protochriacus.)
 1899 A, p. 28. (Protochriacus hyattianus, Loxolophus adapius.)
Roger, O. 1896 A, p. 249 (Protochriacus); p. 250 (Loxolophus).
Scott, W. B. 1892 B, p. 297.
Trouessart, E. L. 1898 A, p. 220.
 Eocene (Puerco); New Mexico.

Loxolophus priscus (Cope).

- Cope, E. D.* 1888 CC, p. 337, text fig. 6. (Chriacus.)
Matthew, W. D. 1897 C, pp. 263, 269. (Protochriacus.)
 1899 A, p. 28.
Osborn and Earle 1895 A, p. 22. (Protochriacus.)
Roger, O. 1896 A, p. 249. (Protochriacus.)
Scott, W. B. 1892 B, p. 296. (Protochriacus.)
Trouessart, E. L. 1898 A, p. 220. (Protochriacus.)
Zittel, K. A. 1893 B, p. 585, fig. 489. (Protochriacus.)
 Eocene (Puerco); New Mexico.

TRICENTES Cope. Type *T. crassicollidens* Cope.

Cope, E. D. 1884 K, p. 315.

1884 O, p. xxxv.

1884 R, p. 60.

1884 S, p. 353.

1885 K, p. 464.

Matthew, W. D. 1897 C, p. 270.

Osborn and Earle 1895 A, p. 23.

Scott, W. B. 1892 B, p. 297.

1892 D, p. 77.

Zittel, K. A. 1893 B, p. 585.

Tricentes crassicollidens Cope.

Cope, E. D. 1884 K, p. 315.

1884 R, p. 61.

1888 CC, p. 304.

Matthew, W. D. 1897 C, pp. 263, 272.

1899 A, p. 29.

Roger, O. 1896 A, p. 250.

Trouessart, E. L. 1898 A, p. 221.

Eocene (Torrejon); New Mexico.

Tricentes subtrigonus Cope.

Cope, E. D. 1881 H, p. 491 (Miocænus subtrigonus); p. 492 (Phenacodus zuniensis).

1883 M, p. 555. (Miocænus subtrigonus, M. bucculentus.)

Cope, E. D. 1884 K, pp. 312, 315, 316.

1884 O, pp. 325, 328, pl. xxivf, fig. 4; pl. lviiif, fig. 5 (M. subtrigonus); pp. 325, 341, pl. xxivg, fig. 2 (M. bucculentus); pp. 433, 491, pl. lviiif, fig. 10 (Phenacodus zuniensis).

1884 R, p. 61. (Tricentes subtrigonus, T. bucculentus.)

1884 S, p. 349, fig. 17. (M. subtrigonus.)

1888 CC, pp. 303, 321 (M. subtrigonus); pp. 303, 336, fig. 7 (T. bucculentus); pp. 304, 340 (Chriacus baldwini, in part); pp. 305, 359 (Protopogonia zuniensis, in part).

Matthew, W. D. 1897 C, pp. 263, 270, fig. 3; p. 310.

1899 A, p. 29.

Osborn and Earle 1895 A, p. 24. (Tricentes bucculentus.)

Roger, O. 1896 A, p. 165 (Euprotopogonia zuniensis); p. 250 (Tricentes bucculentus, T. subtrigonus).

Schlosser, M. 1887 B, p. 221. (Miocænus subtrigonus, M. bucculentus.)

Scott, W. B. 1892 B, pp. 297, 299.

Trouessart, E. L. 1898 A, p. 221. (T. bucculentus, T. subtrigonus.)

Eocene (Torrejon); New Mexico.

The above synonymy is based on Matthew, W. D., 1897 C.

ELLIPSODON Scott. Type *Tricentes inæquidens* (Cope.)

Scott, W. B. 1892 B, p. 298.

1892 D, p. 77.

Ellipsodon inæquidens (Cope).

Cope, E. D. 1884 K, p. 317. (Tricentes.)

1888 CC, pp. 304, 336, fig. 8 (Tricentes); p. 335 (Miocænus minimus).

Matthew, W. D. 1897 C, pp. 263, 315, fig. 17. (Miocænus.)

Roger, O. 1896 A, p. 250.

Scott, W. B. 1892 B, p. 298.

Trouessart, E. L. 1898 A, p. 221 (Ellipsodon); p. 719 (Miocænus).

Eocene (Torrejon); New Mexico.

ARCTOCYONIDÆ.

Cope, E. D. 1877 K, p. 90.

1880 C, p. 78.

1882 E, pp. 156, 157.

1883 I, p. 78.

1884 O, p. 259.

1885 K, p. 469.

Flower and Lydekker 1891 A, p. 609.

Gill, T. 1872 B, pp. 59, 68.

Matthew, W. D. 1897 C, p. 288.

Osborn and Wortman 1892 A, p. 115.

Roger, O. 1896 A, p. 32.

Schlosser, M. 1887 B, p. 219.

Scott, W. B. 1892 A, p. 420.

1892 B, pp. 295, 298.

1892 D, pp. 77, 78.

Trouessart, E. L. 1898 A, p. 222.

Winge, H. 1895 B, pp. 46, 51.

Zittel, K. A. 1893 B, p. 586.

ARCTOCYON Blainv. Type *A. primævus* Blainv.

Blainville, H. M. D. 1864 A (1841), ii, L, p. 73.

No American species belonging to *Arctocyon* are known. The following citations are, however, given to the literature of the genus, since it is the type of the family.

Cope, E. D. 1880 C, p. 79.

1882 E, p. 157.

1884 O, p. 259.

Gaudry, A. 1878 B, p. 22.

Gervais, P. 1859 A, p. 220.

Lemoine, V. 1878 A.

1882 B.

1891 A, p. 272.

Osborn, H. F. 1883 A, p. 32.

1890 C, p. 59, fig. 4.

Schlosser, M. 1887 B, p. 221.

Trouessart, E. L. 1898 A, p. 222.

Winge, H. 1895 B, pp. 46, 91.

Woodward, A. S. 1898 B, p. 381.

Zittel, K. A. 1893 B, p. 586.

CLÆNODON Scott. Type *Mioclænus ferox* Cope.

Scott, W. B. 1892 B, p. 298.

Matthew, W. D. 1897 B, p. 232.

1897 C, p. 288.

1898 A, p. 880.

Osborn and Earle 1895 A, p. 26.

Scott, W. B. 1892 A, p. 420.

1892 D, p. 78.

Winge, H. 1895 B, pp. 46, 100, 101.

Zittel, K. A. 1893 B, p. 587.

Clænodon corrugatus (Cope).

Cope, E. D. 1883 M, p. 557. (Mioclænus.)

1883 W, p. 191. (M. meniscus, no description.)

1884 K, p. 312 (Mioclænus); p. 313 (Oxyclænus).

1884 O, pp. 325, 341, pl. xxivf, fig. 5. (Mioclænus corrugatus); pl. xxivg, fig. 8 (M. ferox).

1884 S, p. 349. (Mioclænus.)

1887 S, p. 275, pl. vii, fig. 1. (Mioclænus.)

1888 CC, p. 332. (Mioclænus.)

1889 C, p. 349. (Mioclænus.)

Matthew, W. D. 1897 C, pp. 264, 290, 320.

1899 A, p. 29.

Roger, O. 1896 A, p. 32.

Schlosser, M. 1887 B, p. 221.

Scott, W. B. 1892 B, p. 299.

Trouessart, E. L. 1898 A, p. 223.

Zittel, K. A. 1893 B, p. 587, fig. 493.

Eocene (Torrejon); New Mexico.

Clænodon ferox (Cope).

Cope, E. D. 1883 M, p. 547. (Mioclænus.)

1884 K, p. 312 (Mioclænus); p. 313 (Oxyclænus.)

1884 O, pp. 325, 328, pl. xxivf, figs. 6, 7, 9-15 (not fig. 8, *vide* Cope). (Mioclænus.)

1884 S, p. 350. (Mioclænus.)

1888 CC, pp. 303, 321. (Mioclænus.)

Matthew, W. D. 1897 C, pp. 264, 289, 320.

1899 A, p. 29.

Osborn and Earle 1895 A, p. 27.

Roger, O. 1896 A, p. 32.

Schlosser, M. 1887 B, p. 221.

Trouessart, E. L. 1898 A, p. 222.

Eocene (Torrejon); New Mexico.

Clænodon protogonioides (Cope).

Cope, E. D. 1882 EE, p. 833. (Mioclænus.)

1884 K, p. 312. (Mioclænus.)

1884 O, pp. 325, 340, pl. xxv, fig. 17. (Mioclænus.)

1888 CC, p. 329. (Mioclænus.)

Matthew, W. D. 1897 C, pp. 264, 291.

1899 A, p. 29.

Roger, O. 1896 A, p. 32.

Schlosser, M. 1887 B, p. 221. (Mioclænus.)

Scott, W. B. 1892 A, p. 420, fig. 4.

1892 B, p. 299.

Trouessart, E. L. 1898 A, p. 223.

Eocene (Puerco and Torrejon); New Mexico.

ANACODON Cope. Type *A. ursidens* Cope.

Cope, E. D. 1882 E, pp. 178, 181.

1882 F, p. 96.

1884 O, pp. 386, 427.

Osborn, H. F. 1893 D.

Osborn and Earle 1895 A, p. 27.

Osborn and Wortman 1892 A, p. 115.

Pavlov, M. 1887 A.

Scott, W. B. 1892 B, p. 300.

1892 D, p. 78.

Wortman, J. L. 1882 B, p. 775.

Zittel, K. A. 1893 B, p. 588.

Anacodon ursidens Cope.

Cope, E. D. 1882 E, p. 181.

1884 O, p. 427, pl. xxvc, fig. 11.

1884 AA, p. 900, fig. 23.

Matthew, W. D. 1899 A, p. 31.

Osborn and Wortman 1892 A, p. 115, fig. 131.

Roger, O. 1896 A, p. 33.

Trouessart, E. L. 1898 A, p. 223.

Eocene (Wasatch); Wyoming.

TRIISODONTIDÆ.

Scott, W. B. 1892 B, pp. 294, 300.

Matthew, W. D. 1897 C, p. 277.

1899 A, pp. 28, 29.

Roger, O. 1896 A, p. 33.

Scott, W. B. 1892 A, p. 421.

Scott, W. B. 1892 D, pp. 77, 78.

Trouessart, E. L. 1898 A, p. 223.

Wortman, J. L. 1899 A, p. 146. (Subfamily of Mesonychidæ.)

Zittel, K. A. 1893 B, p. 588.

TRIISODON Cope. Type *T. quivirensis* Cope.

Cope, E. D. 1881 S, p. 667.

1881 H, p. 484.

1882 E, p. 157.

1882 H, p. 299.

1884 K, p. 311.

1884 O, pp. 260, 270.

1884 S, p. 349.

1887 Q.

Matthew, W. D. 1897 C, p. 278.

Scott, W. B. 1892 A, p. 420.

1892 B, p. 300.

1892 D, p. 78.

Schlosser, M. 1887 B, p. 209.

Winge, H. 1895 B, pp. 46, 51.

Wortman, J. L. 1899 A, p. 147.

Zittel, K. A. 1893 B, p. 588.

Triisodon gaudrianus (Cope).

- Cope, E. D. 1888 CC, pp. 303, 326. (Mioclenus.)
 Matthew, W. D. 1897 C, p. 280.
 1899 A, p. 28.
 Roger, O. 1896 A, p. 33. (T. gaudrianus.)
 Scott, W. B. 1892 B, p. 302. (Goniacodon.)
 Trouessart, E. L. 1898 A, p. 224. (Goniacodon.)
 Eocene (Puerco); New Mexico.

Triisodon heilprinianus Cope.

- Cope, E. D. 1882 E, p. 193.
 1882 C, p. 468. (Conoryctes crassiscuspis.)
 1884 K, p. 310 (T. rusticus); p. 311 (T. heilprinianus).
 1884 O, p. 201, pl. xxiiid, fig. 6 (Conoryctes crassiscuspis); pp. 271, 273, pl. xxviii, fig. 2 (T. heilprinianus.)
 1885 J, p. 386. (Sarcotraustes coryphæus.)
 1888 CC, pp. 303, 321 [Mioclenus (Goniacodon) heilprinianus]; pp. 303, 321 (Mioclenus bathygnathus, M. rusticus); pp. 303, 323 (Mioclenus crassiscuspis); pp. 304, 343 (T. biculminatus); p. 323, figs. 1-4 (Sarcotraustes coryphæus).
 Matthew, W. D. 1897 C, pp. 263, 279, 320.
 1899 A, p. 28.
 Osborn and Earle 1895 A, p. 28, fig. 7 (T. biculminatus); p. 29 (Sarcotraustes coryphæus, S. crassiscuspis).

- Roger, O. 1896 A, p. 33 (T. heilprinianus, T. biculminatus, T. rusticus, Sarcotraustes coryphæus, S. bathygnathus); p. 34 (S. crassiscuspis).
 Schlosser, M. 1886 B, p. 37. (Zetodon crassiscuspis.)
 Scott, W. B. 1892 B, p. 300 (T. heilprinianus); p. 302 (Goniacodon rusticus); p. 303 (Sarcotraustes crassiscuspis, S. bathygnathus).
 1897 A, p. 3. (Miocis bathygnathus.)
 Trouessart, E. L. 1898 A, p. 224 (T. heilprinianus); p. 223 (T. biculminatus); p. 224 (Sarcotraustes coryphæus); p. 225 (S. bathygnathus; S. crassiscuspis).
 Eocene (Puerco); New Mexico.
 The above synonymy is based on Matthew, W. D., 1897 C.

Triisodon quivirensis Cope.

- Cope, E. D. 1881 S, p. 667.
 1881 G, p. 455.
 1884 K, p. 311.
 1884 O, pp. 271, 272, pl. xxvc, fig. 2.
 1884 S, pp. 257, 350, fig. 1.
 1888 CC, p. 304.
 Matthew, W. D. 1897 C, p. 279.
 1899 A, p. 28.
 Roger, O. 1896 A, p. 33.
 Scott, W. B. 1892 B, p. 301.
 Trouessart, E. L. 1898 A, p. 223.
 Wortman, J. L. 1886 A, p. 423 fig. 205.
 Eocene (Puerco); New Mexico.

GONIACODON Cope. Type *G. levisanus* Cope.

- Cope, E. D. 1888 CC, pp. 320, 321. (Subgenus.)
 Matthew, W. D. 1897 C, pp. 278, 281.
 1899 A, p. 29.
 Scott, W. B. 1892 B, p. 301.
 1892 D, p. 78.
 Zittel, K. A. 1893 B, p. 589.

Goniacodon levisanus (Cope).

- Cope, E. D. 1883 M, p. 546. (Triisodon.)
 1884 K, p. 311. (Triisodon.)

- Cope, E. D. 1884 O, pp. 271, 273, pl. xxivf, fig. 3. (Triisodon.)
 1888 CC, pp. 303, 321. [Mioclenus (Goniacodon).]
 Matthew, W. D. 1897 C, pp. 263, 282.
 Roger, O. 1896 A, p. 33.
 Scott, W. B. 1892 B, 302.
 Trouessart, E. L. 1898 A, p. 224.
 Eocene (Torrejon); New Mexico.

MICROCLÆNODON Scott. Type *Triisodon assurgens* Cope.

- Scott, W. B. 1892 B, p. 302.
 1892 D, p. 78.
 Zittel, K. A. 1893 B, p. 589.

Microclænodon assurgens (Cope).

- Cope, E. D. 1884 K, p. 311. (Triisodon.)
 1884 S, p. 350. (Diacodon.)

- Cope, E. D. 1888 CC, pp. 304, 321. [Mioclenus (Goniacodon).]
 Roger, O. 1896 A, p. 33.
 Scott, W. B. 1892 B, p. 302.
 Trouessart, E. L. 1898 A, p. 224.
 Eocene (Puerco); New Mexico.

SARCOTHAUSTES Cope. Type *S. antiquus* Cope.

- Cope, E. D. 1882 E, pp. 158, 193.
 1884 O, pp. 260, 346.
 1884 S, p. 267.
 1888 D, p. 255.
 Matthew, W. D. 1897 C, p. 282.
 Osborn and Earle 1895 A, p. 28.
 Schlosser, M. 1887 B, p. 207.
 Scott, W. B. 1892 A, p. 421.
 1892 B, p. 302.
 1892 D, p. 78.

- Winge, H. 1895 B, pp. 46, 51.
 Zittel, K. A. 1893 B, p. 589.

Sarcotraustes antiquus Cope.

- Cope, E. D. 1882 E, p. 193.
 1882 H, p. 297. (Triisodon conidens.)
 1884 K, p. 311. (Triisodon conidens.)
 1884 O, pp. 271, 274, pl. xxiiid, figs. 9, 10 (Triisodon conidens); p. 347, pl. xxivd, figs. 19-22 (S. antiquus).

- Cope, E. D. 1884 S, p. 267 (S. antiquus); p. 350 (Diacodon conidens).
 1888 CC, pp. 303, 320. (Miocænus antiquus, M. conidens.)
 Matthew, W. D. 1897 C, pp. 263, 283.
 1899 A, p. 29.

- Osborn and Earle 1895 A, p. 29.
 Roger, O. 1896 A, p. 33.
 Scott, W. B. 1893 B, p. 303.
 Trouessart, E. L. 1898 A, p. 224.
 Wortman, J. L. 1899 A, p. 146.
 Eocene (Torrejon); New Mexico.

MESONYCHIDÆ.

- Cope, E. D. 1876 A, p. 3.
 1880 C, pp. 78, 79.
 1882 E, pp. 157, 158.
 1884 O, pp. 259, 260, 355.
 1884 S, pp. 260, 261.
 1888 CC, p. 310.
 Matthew, W. D. 1897 C, p. 284.
 Nicholson and Lydekker 1889 A, p. 1453.
 Osborn, H. F. 1893 D.
 Osborn and Wortman 1892 A, p. 112.
 Roger, O. 1896 A, p. 34.

- Schlosser, M. 1886 C.
 Scott, W. B. 1888 B, p. 164.
 1890 A, p. 472.
 1892 A, p. 419.
 1892 B, pp. 294, 303.
 1892 D, pp. 77, 78.
 Steinmann and Döderlein 1890 A, p. 712.
 Winge, H. 1895 A, pp. 46, 49, 50. (Mesonychini.)
 Wortman, J. L. 1899 A, p. 146. (With subfamilies Mesonychinae and Triissodontinae.)
 Zittel, K. A. 1893 B, p. 589.

DISSACUS Cope. Type *D. navajovius* Cope.

- Cope, E. D. 1881 Z, p. 1019.
 1882 E, p. 158.
 1884 K, p. 324.
 1884 O, pp. 260, 344, 741.
 1884 S, p. 267.
 1888 CC, p. 343.
 Earle, C. 1898 A, p. 261.
 Lemoine, V. 1891 A, p. 271.
 Matthew, W. D. 1897 C, pp. 284, 308.
 Nicholson and Lydekker 1889 A, p. 1453.
 Osborn, H. F. 1893 B, p. 325.
 Osborn and Earle 1895 A, p. 30.
 Osborn and Wortman 1892 A, p. 112.
 Schlosser, M. 1887 B, p. 209.
 Scott, W. B. 1892 A, pp. 418, 420.
 1892 B, p. 303.
 1892 D, p. 78.
 Winge, H. 1895 B, pp. 46, 49, 91, 100, 101.
 Wortman, J. L. 1899 A, p. 147.
 Zittel, K. A. 1893 B, p. 589.

Dissacus navajovius Cope.

- Cope, E. D. 1881 H, p. 484. (Miocænus.)
 1881 Z, p. 1019.
 1882 E, p. 165.
 1882 EE, p. 834. (D. carnifex.)
 1884 O, p. 345, pl. xxvc, fig. 1 (D. navajovius); pp. 345, 741, pl. xxivg, figs. 3, 4 (D. carnifex).
 1884 S, p. 267, fig. 11.
 1888 CC, pp. 304, 344 (D. navajovius); p. 304 (D. carnifex).
 Matthew, W. D. 1897 C, pp. 263, 284, 320.
 1899 A, pp. 29, 31, footnote.
 Osborn, H. F. 1893 H, p. 174, fig. 5. (D. carnifex.)
 Roger, O. 1896 A, p. 34. (D. navajovius, D. carnifex.)
 Trouessart, E. L. 1898 A, p. 225. (D. carnifex, D. navajovius.)
 Wortman, J. L. 1886 A, p. 420, fig. 202.
 Eocene (Torrejon); New Mexico.

Dissacus leptognathus Osb. and Wort.

- Osborn and Wortman 1892 A, p. 112 (D. leptognathus); fig. 10 [? Dissacus (Pachyæna) leptognathus].
 Matthew, W. D. 1899 A, p. 31.
 Roger, O. 1896 A, p. 34.
 Scott, W. B. 1892 B, p. 304.
 Trouessart, E. L. 1893 B, p. 225.
 Eocene (Wasatch); Wyoming.

Dissacus saurognathus Wort.

- Wortman, J. L. in Matthew, W. D. 1897 C, pp. 263, 285, 320, fig. 9.
 Matthew, W. D. 1899 A, p. 29.
 Osborn and Earle 1895 A, p. 30, figs. 8, 9. (D. carnifex, not of Cope.)
 Eocene (Torrejon); New Mexico.

PACHYÆNA Cope. Type *P. ossifraga* Cope.

- Cope, E. D. 1874 O, p. 13.
 1877 K, p. 94.
 1881 Z, p. 1018.
 1882 E, p. 165.
 Earle, C. 1898 A, p. 261.
 Matthew, W. D. 1897 C, p. 284.
 1899 A, p. 31, footnote.
 Osborn and Earle 1895 A, p. 38.
 Scott, W. B. 1888 B, p. 165.
 1892 A, p. 420.
 1892 B, p. 304.

- Scott, W. B. 1892 D, p. 79.
 Winge, H. 1895 B, pp. 46, 49, 91, 100, 101.
 Zittel, K. A. 1893 B, p. 590.

Pachyæna gigantea Osb. and Wort.

- Osborn and Wortman 1892 A, p. 113, figs. 11, 12.
 Matthew, W. D. 1899 A, p. 31.
 Roger, O. 1896 A, p. 34.
 Trouessart, E. L. 1898 A, p. 225.
 Zittel, K. A. 1893 B, p. 590, fig. 495.
 Eocene (Wasatch); Wyoming.

Pachyaena intermedia Wort.

Wortman, J. L. 1899 A, p. 147.

Matthew, W. D. 1899 A, p. 31. (No description.)
Eocene (Wasatch); Wyoming.

Pachyaena ossifraga Cope.

Cope, E. D. 1874 O, p. 13.

1875 C, p. 11.

1875 F, p. 94.

1877 K, p. 94, pl. xxxix, fig. 10.

1881 Z, p. 1018. (Mesonyx.)

1882 E, p. 165. (Mesonyx.)

1882 S, p. 334.

Cope, E. D. 1884 O, p. 362, pl. xxiv, fig. 14-19; pl. xxviii, fig. 1; pl. xxviii b; pl. xxviii c; pl. xxviii d. (Mesonyx.)

1884 S, p. 264, figs. 2, 6, 8, 10. (Mesonyx.)

King, C. 1878 A, p. 376.

Matthew, W. D. 1899 A, p. 31.

Osborn and Wortman 1892 A, p. 112.

Roger, O. 1896 A, p. 34.

Schlosser, M. 1887 B, p. 206.

Steinmann and Döderlein 1880 A, p. 714.

Trouessart, E. L. 1898 A, p. 225.

Wortman, J. L. 1886 A, p. 418, figs. 200, 201. (Mesonyx.)

1899 A, p. 147.

Eocene (Wasatch); New Mexico, Wyoming.

MESONYX Cope. Type *M. obtusidens* Cope.

Cope, E. D. 1872 M, p. 460.

Allen, H. 1886 B.

Cope, E. D. 1872 R, p. 483. (Synoplotherium, type *S. lanius*.)

1872 HH.

1873 E, p. 550 (Mesonyx); p. 554 (Synoplotherium).

1873 G, p. 198 (Mesonyx); p. 203 (Synoplotherium).

1875 C, p. 5 (Mesonyx); p. 9 (Synoplotherium).

1875 L, p. 21.

1876 A, p. 1 (Synoplotherium); p. 3 (Mesonyx).

1880 C, p. 79.

1881 Z.

1882 E, p. 158.

1882 S, p. 334.

1884 O, pp. 260, 348.

1884 S, p. 263.

1887 S, pp. 251, 278.

Earle, C. 1898 A, p. 261.

Flower, W. H. 1876 B, xiii, p. 514.

Flower and Lydekker 1891 A, p. 609.

Major, Fors. 1893 A, p. 200.

Marsh, O. C. 1876 H, p. 403. (Dromocyon, type *D. vorax*.)

1877 E. (Dromocyon, Mesonyx.)

Matthew, W. D. 1897 C, p. 284.

Nicholson and Lydekker 1889 A, p. 1453.

Osborn, H. F. 1893 D, p. 6.

Osborn and Earle 1895 A, p. 37.

Schlosser, M. 1887 B, p. 206 (Synoplotherium); p. 207 (Mesonyx).

1890 B, p. 64.

Scott, W. B. 1888 B, p. 164 (Mesonyx); p. 165 (Synoplotherium).

1890 A, p. 472.

1892 A, p. 420.

1892 B, p. 306.

1892 D, p. 79.

Steinmann and Döderlein 1890 A, p. 713.

Wilckens, M. 1885 D, p. 523. (Dromocyon.)

Winge, H. 1895 B, pp. 46, 49, 91.

Woodward, A. S. 1898 B, p. 382.

Wortman, J. L. 1886 A, p. 417.

Zittel, K. A. 1893 B, p. 590.

Mesonyx? dakotensis Scott.

Scott, W. B. 1892 B, p. 306.

Trouessart, E. L. 1898 A, p. 226.

Oligocene (White River); South Dakota.

Mesonyx lanius Cope.

Cope, E. D. 1872 R, p. 483. (Synoplotherium.)

1873 E, p. 557, pls. v, vi. (Synoplotherium.)

1873 G, p. 207. (Synoplotherium.)

1877 K, p. 94. (Synoplotherium.)

1884 O, pp. 264, 348, 358, pl. xxvii, figs. 25-28; pl. xxviii; pl. xxix, figs. 1-6; pl. xix a, fig. 1.

1884 S, p. 265, fig. 7.

Matthew, W. D. 1899 A, p. 41.

Osborn and Wortman 1892 A, p. 113.

Roger, O. 1896 A, p. 34.

Trouessart, E. L. 1898 A, p. 226.

Eocene (Bridger); Wyoming.

Mesonyx obtusidens Cope.

Cope, E. D. 1872 M, p. 460.

1873 E, p. 552.

1873 G, p. 201.

1884 O, pp. 348, 355, pl. xxvi, figs. 3-12; pl. xxvii, figs. 1-24.

1884 S, p. 264.

1887 M.

Matthew, W. D. 1899 A, pp. 41, 49.

Osborn, H. F. 1896 C, p. 107, illus. 3.

1898 Q, p. 18.

Roger, O. 1896 A, p. 34.

Scott, W. B. 1888 B, p. 155, pl. v; pl. vi, fig. 1; pl. vii, figs. 1-3.

1892 B, p. 307.

Trouessart, E. L. 1898 A, p. 226.

Eocene (Bridger); Wyoming; (Uinta); Utah.

Mesonyx uintensis Scott.

Scott, W. B. 1888 B (1887), p. 168. (M.? uintensis.)

Cope, E. D. 1887 M, p. 927. (M. uintaensis.)

Matthew, W. D. 1899 A, p. 49.

Osborn, H. F. 1895 A, p. 79, fig. 4.

Roger, O. 1896 A, p. 34.

Scott, W. B. 1890 A, p. 471, pl. x, fig. 9.

Scott and Osborn 1887 A, p. 255. (Name only.)

Trouessart, E. L. 1898 A, p. 226.
Eocene (Uinta); Utah.

Mesonyx vorax (Marsh).

Marsh, O. C. 1876 H, p. 403. (Dromocyon.)
King, C. 1878 A, p. 403.
Matthew, W. D. 1899 A, p. 41.

Schlosser, M. 1890 B, p. 63. (Dromocyon.)
Scott, W. B. 1892 B, p. 306. (Syn. of *Mesonyx obtusidens*.)
Trouessart, E. L. 1898 A, p. 228. (Syn. of *M. obtusidens*.)
Eocene (Bridger); Wyoming.

PROVIVERRIDÆ.

Schlosser, M. 1886 C, p. 293.
Flower and Lydekker 1891 A, p. 608.
Lydekker, R. 1887 A, p. 307.
Matthew, W. D. 1899 A, pp. 31, 35, 40.
Nicholson and Lydekker 1889 A, p. 1452.
Roger, O. 1896 A, p. 34.
Scott, W. B. 1892 B, pp. 294, 307.

Scott, W. B. 1892 D, pp. 77, 79.
1894 F, p. 501.
Steinmann and Döderlein 1890 A, p. 712.
Trouessart, E. L. 1898 A, p. 226.
Winge, H. 1895 B, pp. 46, 48. (Proviverrini.)
Zittel, K. A. 1893 B, p. 592.

DELTATHERIUM Cope. Type *D. fundaminis* Cope.

Cope, E. D. 1881 N, p. 337.
1881 H, p. 486.
1881 Z, p. 1019. (*Lipodectes*, type *L. penetrans* Cope.)
1882 E, p. 157. (*Deltatherium*, *Lipodectes*.)
1884 O, pp. 260, 277.
1884 S, p. 352.
1888 D, p. 255.
Lydekker, R. 1887 A, p. 309.
Nicholson and Lydekker 1889 A, p. 1453.
Osborn and Earle 1895 A, p. 39.
Schlosser, M. 1887 A, p. 219.
1888 B, pp. 16, 23.
Scott, W. B. 1892 A, p. 418.
1892 B, p. 308.
1892 D, p. 79.
Trouessart, E. L. 1898 A, p. 227.
Winge, H. 1895 B, pp. 46, 49, 91, 101.
Zittel, K. A. 1893 B, p. 592.

Cope, E. D. 1882 X, p. 522.
1884 O, p. 278, pl. xxiii, figs. 8-11; pl. xxva, fig. 10; pl. xxvd, fig. 3.
1884 S, p. 352, fig. 20.
1888 D.
1888 CC, p. 304.
1889 C, p. 229, fig. 54.
Lydekker, R. 1887 A, p. 309.
Matthew, W. D. 1899 A, p. 29.
Osborn and Earle 1895 A, p. 40, figs. 10, 11.
Roger, O. 1896 A, p. 35.
Trouessart, E. L. 1898 A, p. 227.
Zittel, K. A. 1893 B, p. 593, fig. 497.
Eocene (Puerco); New Mexico.

Deltatherium? interruptum Cope.

Cope, E. D. 1882 C, p. 463.
1884 O, p. 282, pl. xxiii, fig. 13.
1888 CC, pp. 303, 328. (*Miocænus*.)
Matthew, W. D. 1899 A, p. 28. (*Miocænus*.)
Roger, O. 1896 A, p. 164.
Scott, W. B. 1892 B, p. 323. (Genus not determined.)
Trouessart, E. L. 1898 A, p. 720.
Eocene (Puerco); New Mexico.

Deltatherium fundaminis Cope.

Cope, E. D. 1881 N, p. 337.
1881 H, p. 486.
1881 Z, p. 1019. (*Lipodectes penetrans*.)
1882 C, p. 463.

STYPOLOPHUS Cope. Type *S. pungens* Cope.

Cope, E. D. 1872 N, p. 466.
1872 E, p. 469. (*Triacodon*, not of Marsh.)
1873 E, p. 559 (*Stypolophus*); pp. 560, 611 (*Triacodon*.)
1874 O, p. 13. (*Prototomus*, type *P. viverrinus*.)
1875 C, pp. 5, 9. (*Prototomus*.)
1875 L, p. 21. (*Stypolophus*.)
1876 A. (*Stypolophus*.)
1877 K, pp. 87, 109, 112. (*Stypolophus*.)
1879 A, p. 43. (*Stypolophus*.)
1880 C, p. 79. (*Stypolophus*.)
1882 E, p. 158 (*Stypolophus*); p. 164 (*Prototomus*.)
1884 E. (*Stypolophus*.)
1884 O, pp. 35, 260, 285 (*Stypolophus*); p. 35 (*Prototomus*.)

Cope, E. D. 1884 S, p. 350. (*Stypolophus*.)
1887 S, p. 251. (*Stypolophus*.)
1888 D. (*Stypolophus*.)
1889 C, p. 232. (*Stypolophus*.)
Leidy, J. 1871 F, p. 115. (*Sinopa*, type *S. rapax*; description insufficient.)
1872 B, p. 355.¹ (*Sinopa*.)
1873 B, p. 116. (*Sinopa*.)
Marsh, O. C. 1872 G, p. 126. (*Limnocyon*, type *L. verus*.)
1877 E.
Matthew, W. D. 1899 A, p. 31. (*Sinopa*.)
Nicholson and Lydekker, 1889 A, p. 1437. (*Stypolophus*=*Proviverra*; *Limnocyon*.)
Osborn, Scott, and Speir 1878 A, p. 18. (*Sinopa*.)
Schlosser, M. 1887 B, p. 218. (*Stypolophus*.)
1888 B, p. 16. (*Stypolophus*.)

¹ In case this paper was issued before Cope 1872 N ("Aug. 3, 1872") *Sinopa* will replace *Stypolophus*.

- Schlosser, M. 1890 C, p. 244. (Stypolophus.)
 Scott, W. B. 1892 A, p. 419. (Sinopa.)
 1892 B, p. 308. (Sinopa.)
 1892 D, p. 79. (Sinopa.)
 Trouessart, E. L. 1898 A, p. 227.
 Wilckens, M. 1885 D, p. 524. (Sinopa.)
 Winge, H. 1895 B, pp. 46, 47, 52, 91, 100, 101.
 Woodward, A. S. 1898 B, p. 388.
 Zittel, K. A. 1893 B, pp. 592. (Sinopa.)

Stypolophus aculeatus Cope.

- Cope, E. D.* 1872 M, p. 460. (Triacodon.)
 1872 E, p. 469. (Triacodon.)
 1873 E, pp. 560, 611. (Triacodon.)
 1873 U, p. 3. (Triacodon.)
 1877 K, p. 112.
 1882 E, p. 161.
 1884 O, pp. 290, 299, pl. xxiv, figs. 6, 7; p. xxvii, figs. 1, 2.

- Matthew, W. D. 1899 A, p. 31. (Sinopa.)
 Roger, O. 1896 A, p. 35.
 Scott, W. B. 1892 B, p. 310. (Sinopa.)
 Trouessart, E. L. 1898 A, p. 227. (Sinopa.)
 Eocene (Wasatch); New Mexico.

Stypolophus agilis (Marsh).

- Marsh, O. C.* 1872 I, p. 204. (Limnocyon.)
 Matthew, W. D. 1899 A, p. 40. (Sinopa.)
 Roger, O. 1896 A, p. 35 (S. agilis); p. 41 (Miacyis agilis).
 Schlosser, M. 1890 B, p. 63. (Limnocyon.)
 Scott, W. B. 1892 B, p. 310. (Sinopa.)
 Trouessart, E. L. 1898 A, p. 227 (Sinopa); p. 236 (Miacyis?).
 Eocene (Bridger); Wyoming.

Stypolophus brevicealcaratus Cope.

- Cope, E. D.* 1872 E, p. 469. (S. brevicealcarabus, error.)
 1873 E, p. 560.
 1884 O, pp. 290, 291, pl. xxiv, fig. 9.
 Matthew, W. D. 1899 A, p. 40. (Syn. of Sinopa agilis.)
 Roger, O. 1896 A, p. 35.
 Scott, W. B. 1892 B, p. 310. (Sinopa.)
 Trouessart, E. L. 1898 A, p. 227. (Sinopa.)
 Eocene (Bridger), Wyoming.

Stypolophus hians Cope.

- Cope, E. D.* 1877 K, pp. 72, 118, pl. xxxviii, figs. 12-20.
 1876 A, p. 1. (No description.)
 1884 O, p. 290. (Prototomus.)
 Matthew, W. D. 1899 A, p. 31. (Sinopa.)
 Roger, O. 1896 A, p. 36.
 Scott, W. B. 1892 B, p. 310. (Sinopa.)
 Trouessart, E. L. 1898 A, p. 228. (Sinopa.)
 Eocene (Wasatch); New Mexico, Wyoming.

Stypolophus insectivorus Cope.

- Cope, E. D.* 1872 E, p. 469.
 1873 E, p. 559.
 1884 O, p. 290, pl. xxiv, figs. 10, 11.
 Matthew, W. D. 1899 A, p. 40.
 Roger, O. 1896 A, p. 35
 Scott, W. B. 1892 B, p. 310 (Sinopa.)
 Trouessart, E. L. 1898 A, p. 227 (Sinopa.)
 Eocene (Bridger), Wyoming.

Stypolophus multispis Cope.

- Cope, E. D.* 1875 C, p. 10. (Prototomus.)
 1877 K, pp. 112, 116, pl. xxxix, figs. 12-14.
 1884 O, p. 290.
 Matthew, W. D. 1899 A, p. 31. (Sinopa.)
 Roger, O. 1896 A, p. 36.
 Scott, W. B. 1892 B, p. 310. (Sinopa.)
 Trouessart, E. L. 1898 A, p. 227. (Sinopa.)
 Eocene (Wasatch); New Mexico.

Stypolophus pungens Cope.

- Cope, E. D.* 1872 N, p. 466.
 1873 E, p. 559.
 1884 O, pp. 290, 291, pl. xxiv, fig. 8.
 Matthew, W. D. 1899 A, p. 40. (Sinopa.)
 Roger, O. 1896 A, p. 35.
 Scott, W. B. 1892 B, p. 310. (Sinopa.)
 Trouessart, E. L. 1898 A, p. 227. (Sinopa.)
 Eocene (Bridger); Wyoming.

Stypolophus rapax (Leidy).

- Leidy, J.* 1872 B, p. 355. (Sinopa.)
 King, C. 1878 A, p. 403. (Sinopa.)
 Leidy, J. 1871 F, p. 115. (Sinopa; insufficient description.)
 1873 B, pp. 116, 118, 316, pl. vi, fig. 44. (Sinopa.)
 Matthew, W. D. 1899 A, p. 40. (Sinopa.)
 Roger, O. 1896 A, p. 35.
 Schlosser, M. 1887 B, p. 35. (Sinopa.)
 Scott, W. B. 1892 B, p. 311. (Sinopa.)
 Trouessart, E. L. 1898 A, p. 227. (Sinopa.)
 Eocene (Bridger); Wyoming.

Stypolophus secundarius Cope.

- Cope, E. D.* 1875 C, p. 9. (Prototomus.)
 1877 K, p. 115.
 1884 O, p. 290.
 Matthew, W. D. 1899 A, p. 31. (Sinopa.)
 Roger, O. 1896 A, p. 35.
 Scott, W. B. 1892 B, p. 310. (Sinopa.)
 Trouessart, E. L. 1898 A, p. 227. (Sinopa.)
 Eocene (Wasatch); New Mexico.

Stypolophus strenuus Cope.

- Cope, E. D.* 1875 C, p. 10. (Prototomus.)
 1877 K, p. 117, pl. xxxix, fig. 11.
 1880 N, p. 746.
 1882 E, p. 161. (Syn. of S. whiteæ.)
 1884 O, p. 290.
 Matthew, W. D. 1899 A, p. 31. (Sinopa.)
 Roger, O. 1896 A, p. 36.
 Scott, W. B. 1892 B, p. 310. (Sinopa.)
 Trouessart, E. L. 1898 A, p. 228. (Sinopa.)
 Eocene (Wasatch), New Mexico, Wyoming.

Stypolophus verus (Marsh).

- Marsh, O. C.* 1872 G, p. 126. (Limnocyon.)
 Matthew, W. D. 1899 A, p. 40. (Sinopa.)
 Roger, O. 1896 A, p. 35 (S. verus); p. 41 (Miacyis vetus).
 Schlosser, M. 1890 B, pp. 62, 64. (Limnocyon vetus.)
 Scott, W. B. 1892 B, p. 310. (Sinopa.)
 Trouessart, E. L. 1898 A, p. 227 (Sinopa); p. 236 (Miacyis? vetus).
 Eocene (Bridger); Wyoming.

Stypoiop'hus viverrinus Cope.

- Cope, E. D.* 1874 O, p. 13. (Prototomus.)
 1875 C, p. 9. (Prototomus.)
 1877 K, p. 112, pl. xxxviii, figs. 1-11.
 1884 O, p. 290. (Prototomus.)
Matthew, W. D. 1899 A, pp. 31, 35. (Sinopa.)
Roger, O. 1896 A, p. 35.
Scott, W. B. 1892 B, p. 310. (Sinopa.)
Trouessart, E. L. 1897 A, p. 227. (Sinopa.)
 Eocene (Wasatch, Wind River); New Mexico,
 Wyoming.

Stypolophus whiteæ Cope.

- Cope, E. D.* 1882 E, p. 161.

- Cope, E. D.* 1881 D, p. 192. (S. strenuus, not of
 Cope, 1875.)
 1884 O, pp. 290, 292, pl. xxv, figs. 8-14; pl.
 xxvd, figs. 1, 2.
 1884 S, p. 347, fig. 13.
 1889 C, p. 232, fig. 58.
Lydekker, R. 1887 A, p. 308, fig. 46. (Proviverra.)
Matthew, W. D. 1899 A, pp. 31, 35. (Sinopa.)
Roger, O. 1896 A, p. 36.
Scott, W. B. 1892 B, p. 310. (Sinopa.)
Trouessart, E. L. 1897 A, p. 228. (Sinopa.)
Woodward, A. S. 1898 B, p. 383, fig. 214.
Wortman, J. L. 1886 A, p. 422, fig. 204.
 Eocene (Wasatch and Wind River); Wyom-
 ing.

TRIACODON Marsh. Type *T. fallax* Marsh.

- Marsh, O. C.* 1871 E, p. 123. (Not *Triacodon* of
 Cope.)
Schlosser, M. 1887 B, p. 144.
Zittel, K. A. 1893 B, p. 603.
 The systematic position of this genus is un-
 certain.

Triacodon fallax Marsh.

- Marsh, O. C.* 1871 E, p. 123.
Cope, E. D. 1873 E, p. 612.
Leidy, J. 1872 B, p. 357.
 1873 B, p. 123.
Matthew, W. D. 1899 A, p. 41.
Schlosser, M. 1887 B, p. 144.
 Eocene (Bridger); Wyoming.

Triacodon grandis Marsh.

- Marsh, O. C.* 1872 I, p. 222.
Cope, E. D. 1873 U, p. 3.
Matthew, W. D. 1899 A, p. 41.
Schlosser, M. 1887 B, p. 144.
 Eocene (Bridger); Wyoming.

Triacodon nanus Marsh.

- Marsh, O. C.* 1872 I, p. 223.
Matthew, W. D. 1899 A, p. 41.
Schlosser, M. 1887 B, p. 144.
 Eocene (Bridger); Wyoming.

PROVIVERRA Rüttimeyer. Type *P. typica* Rüttimeyer.

- Rüttimeyer, L.*, 1862, Schweiz. Gesell. Naturwiss.,
 p. 80.
Cope, E. D. 1880 C, p. 79.
 1882 E, p. 158.
 1884 O, p. 260.
Flower and Lydekker 1891 A, p. 608.
Gaudry, A. 1878 B, p. 20.
Lydekker, R. 1887 A, p. 308.
Nicholson and Lydekker 1889 A, p. 1452.
Schlosser, M. 1887 B, p. 213.
Scott, W. B. 1892 A, p. 419.
 1892 B, p. 311.

- Winge, H.* 1895 B, p. 91.
Zittel, K. A. 1893 B, p. 593.

Proviverra americana Scott.

- Scott, W. B.* 1892 B, p. 311.
Matthew, W. D. 1899 A, p. 40.
Osborn, Scott, and Speir 1878 A, p. 18. (Sinopa
 rapax, not of Leidy.)
Roger, O. 1896 A, p. 36.
Trouessart, E. L. 1897 A, p. 228.
 Eocene (Bridger); Wyoming.

DIDELPHODUS Cope. Type *Deltatherium absarokæ* Cope.

- Cope, E. D.* 1882 X, p. 522.
 1884 O, pp. 260, 283.
 1884 S, p. 351.
 1888 D, p. 255.
Nicholson and Lydekker 1889 A, p. 1453.
Schlosser, M. 1887 B, p. 214.
 1888 B, pp. 16, 23.
 1890 C, p. 244.
Scott, W. B. 1892 B, p. 311.
 1892 D, p. 79.
Winge, H. 1895 B, pp. 46, 49, 91, 101.
Zittel, K. A. 1893 B, p. 595.

Didelphodus absarokæ Cope.

- Cope, E. D.* 1881 S, p. 669. (Deltatherium.)
 1882 E, p. 161. (Deltatherium.)
 1882 X, p. 522.
 1884 O, p. 284, pl. xxive, fig. 13.
 1884 S, p. 351, fig. 19.
Matthew, W. D. 1899 A, p. 31.
Roger, O. 1896 A, p. 36.
Scott, W. B. 1892 B, p. 311.
Trouessart, E. L. 1897 A, p. 229.
 Eocene (Wasatch); Wyoming.

PALÆOSINOPA Matth. Type *P. veterrima* Matth.

Matthew, W. D. 1899 A, p. 31. (Palæosinopa "Wortman"; no description.)
 For description of this genus and its type species see Bull. Amer. Mus. Nat. Hist., xiv, 1901, p. 22.

Palæosinopa veterrima Matth.

Matthew, W. D. 1899 A, p. 31. (*P. veterrima* "Wortman"; no description.)
 Eocene (Wasatch); Wyoming.

VIVERRAVIDÆ.

Wortman and Matthew 1899 A, p. 136.

VIVERRAVUS Marsh. Type *V. gracilis* Marsh.

Marsh, O. C. 1872 G, p. 127.

Cope, E. D. 1873 E, p. 560.

1875 C, pp. 5, 11. (Didymictis, type *D. protenus*.)

1876 A. (Didymictis.)

1877 K, pp. 87, 123. (Didymictis.)

1880 C, p. 79. (Didymictis.)

1882 C, p. 470. (Didymictis.)

1882 E, pp. 157, 158. (Didymictis.)

1884 O, pp. 260, 304. (Didymictis.)

1884 S, p. 484. (Didymictis.)

1887 M, p. 927. (Didymictis.)

1888 K, p. 162. (Didymictis.)

Matthew, W. D. 1897 C, p. 286.

1899 A, pp. 30, 35.

Nicholson and Lydekker 1889 A, p. 1437. (Didymictis, *Viverravus*.)

Osborn, H. F. 1888 F, p. 1076. (Didymictis.)

Osborn and Wortman 1892 A, p. 111. (Didymictis.)

Schlosser, M. 1890 B, pp. 1, 61. (Didymictis.)

1899 A, p. 86. (Didymictis.)

Scott, W. B. 1890 A, p. 473. (Didymictis.)

1890 C, p. 265. (Didymictis.)

1892 A, p. 419. (Didymictis.)

1892 B, p. 318 (Didymictis); p. 321 (*Viverravus*).

1892 D, p. 80. (Didymictis.)

Steinmann and Döderlein 1890 A, p. 716. (Didymictis.)

Trouessart, E. L. 1897 A, p. 235.

Winge, H. 1895 B, pp. 46, 52, 53, 91.

Wortman, J. L. 1886 A, p. 430.

Zittel, K. A. 1893 B, p. 602 (Didymictis); p. 603 (*Viverravus*).

Viverravus altidens (Cope).

Cope, E. D. 1880 N, p. 746. (Didymictis.)

1881 D, p. 190. (Didymictis.)

1882 E, p. 159. (Didymictis.)

1884 O, pp. 305, 307, pl. xxva, figs. 13, 14. (Didymictis.)

Earle C. 1898 A, p. 261. (Didymictis.)

Matthew, W. D. 1897 C, p. 287. (Didymictis.)

1899 A, p. 35. (*Viverravus*.)

Osborn, H. F. 1897 G, p. 255. (Didymictis.)

Roger, O. 1896 A, p. 40. (Didymictis.)

Scott, W. B. 1888 B, p. 169. (Didymictis.)

1892 B, p. 320. (Didymictis.)

Trouessart, E. L. 1897 A, p. 235. (Didymictis.)

Eocene (Wasatch, Wind River, Bridger); Wyoming.

Viverravus curtidens (Cope).

Cope, E. D. 1882 E, p. 160. (Didymictis.)

1884 O, pp. 306, 313, pl. xxivd, fig. 10. (Didymictis.)

1884 S, p. 484. (Didymictis curtus, error? for *D. curtidens*.)

Matthew, W. D. 1897 C, p. 287. (Didymictis.)

1899 A, p. 30. (*Viverravus*.)

Osborn and Wortman 1892 A, pp. 83, 111. (Didymictis.)

Roger, O. 1896 A, p. 40. (Didymictis.)

Scott, W. B. 1892 B, p. 320. (Didymictis.)

Trouessart, E. L. 1897 A, p. 235. (Didymictis.)

Eocene (Wasatch); Wyoming.

Viverravus gracilis Marsh.

Marsh, O. C. 1872 G, p. 127.

Cope, E. D. 1881 D, p. 191. (Didymictis dawkinsianus.)

1882 E, pp. 158, 159. (Didymictis dawkinsianus.)

1884 O, pp. 306, 310, pl. xxva, fig. 11. (Didymictis dawkinsianus.)

1884 S, p. 485, fig. 30. (Didymictis dawkinsianus.)

Matthew, W. D. 1897 C, pp. 264, 286. (Didymictis dawkinsianus.)

1899 A, pp. 35, 40.

Osborn, H. F. 1897 G, p. 255. (Didymictis dawkinsianus.)

Osborn and Wortman 1892 A, pp. 83, 111. (Didymictis dawkinsianus.)

Roger, O. 1896 A, p. 40 (Didymictis dawkinsianus); p. 41 (*V. gracilis*).

Schlosser, M. 1890 B, p. 63.

Scott, W. B. 1892 B, p. 320 (Didymictis dawkinsianus); p. 321 (*V. gracilis*).

Trouessart, E. L. 1897 A, p. 235 (Didymictis dawkinsianus); p. 236 (*V. gracilis*).

Wortman and Matthew 1899 A, p. 136.

Zittel, K. A. 1893 B, p. 603, fig. 506 B. (Didymictis dawkinsianus.)

Eocene (Wasatch, Wind River, Bridger), Wyoming, Colorado.

Viverravus haydenianus (Cope).

Cope, E. D. 1882 C, p. 464. (Didymictis.)

1884 K, 309. (Didymictis primus.)

1884 O, pp. 305, 306, pl. xxiii, figs. 12, 13. (Didymictis.)

1884 S, p. 484. (Didymictis.)

- Cope, E. D. 1888 CC, p. 304. (*D. haydenianus*, *D. primus*.)
 Matthew, W. D. 1897 C, pp. 286, 287. (*Didymictis*.)
 1899 A, p. 29. (*Viverravus*.)
 Roger, O. 1896 A, p. 40. (*Didymictus haydenianus*, *D. primus*.)
 Scott, W. B. 1892 B, p. 320. (*Didymictus*.)
 Trouessart, E. L. 1897 A, p. 234 (*D. haydenianus*); p. 235 (*D. primus*.)
 Zittel, K. A. 1893 B, p. 603, fig. 506 A. (*Didymictis*.)
 Eocene (Torrejon); New Mexico.

Viverravus leptomytus (Cope).

- Cope, E. D. 1880 O, p. 908. (*Didymictis*.)
 1881 D, p. 191. (*Didymictis*.)
 1882 E, p. 159. (*Didymictus*.)
 1884 O, pp. 305, 309, pl. xxva, fig. 12. (*Didymictis*.)
 Matthew, W. D. 1897 C, p. 287. (*Didymictis*.)
 1899 A, p. 30, footnote; p. 35. (*Viverravus*.)
 Osborn and Wortman 1892 A, pp. 83, 111. (*Didymictis*.)
 Roger, O. 1896 A, p. 40. (*Didymictis*.)
 Scott, W. B. 1892 B, 320. (*Didymictis*.)
 Trouessart, E. L. 1897 A, p. 235. (*Didymictis*.)
 Eocene (Wind River); Wyoming.

Viverravus massetericus (Cope).

- Cope, E. D. 1882 E, p. 159. (*Didymictis*.)
 1884 O, pp. 306, 312, pl. xxiv, fig. 11. (*Didymictis*.)
 1884 S, p. 484, fig. 29. (*Didymictis*.)
 Matthew, W. D. 1897 C, p. 287. (*Didymictis*.)

- Matthew, W. D. 1899 A, p. 30. (*Viverravus*.)
 Roger, O. 1896 A, p. 40.
 Scott, W. B. 1892 B, p. 320. (*Didymictis*.)
 Trouessart, E. L. 1897 A, p. 235. (*Didymictis*.)
 Eocene (Wasatch); Wyoming.

Viverravus nitidus Marsh.

- Marsh, O. C. 1872 I, p. 205.
 Matthew, W. D. 1899 A, p. 40.
 Roger, O. 1896 A, p. 41.
 Schlosser, M. 1887 B, p. 143. (*Entomodon?*.)
 1890 B, p. 63.
 Scott, W. B. 1892 B, p. 321.
 Trouessart, E. L. 1897 A, p. 236.
 Eocene (Bridger); Wyoming.

Viverravus protenus (Cope).

- Cope, E. D. 1874 O, p. 15. (*Limnocyon*.)
 1875 C, p. 11. (*Didymictis*.)
 1875 L, p. 21. (*Didymictis*.)
 1877 K, p. 123, pl. xxxix, figs. 1-9. (*Didymictis*.)
 1882 E, p. 159. (*Didymictis*.)
 1884 O, pp. 305, 311, pl. xxvd, figs. 4, 5. (*Didymictis*.)
 1887 S, p. 245. (*Didymictis*.)
 Matthew, W. D. 1897 C, p. 286. (*Didymictis*.)
 1899 A, pp. 30, 35. (*Viverravus*.)
 Osborn, H. F. 1897 (4), p. 255. (*Didymictis*.)
 Roger, O. 1896 A, p. 40. (*Didymictis*.)
 Scott, W. B. 1892 B, p. 320. (*Didymictis*.)
 Trouessart, E. L. 1897 A, p. 235. (*Didymictis*.)
 Eocene (Wasatch); New Mexico, Wyoming, Colorado.

TELMATO CYON Marsh. Type *Limnocyon riparius* Marsh.

- Marsh, O. C. 1899 B, p. 397.

Telmatocyon riparius Marsh.

- Marsh, O. C. 1872 I, p. 203. (*Limnocyon*.)
 1899 B, p. 397.
 King, C. 1878 A, p. 403. (*Limnocyon*.)

- Matthew, W. D. 1899 A, pp. 35, 40. (*Viverravus*.)
 Roger, O. 1896 A, p. 41. (*Viverravus*.)
 Schlosser, M. 1890 B, pp. 63, 64. (*Limnocyon*.)
 Scott, W. B. 1891 B, pp. 310, 321. (*Viverravus*.)
 Trouessart, E. L. 1897 A, p. 236. (*Viverravus*.)
 Eocene (Wind River, Bridger); Wyoming.

AMBLOCTONIDÆ.

- Cope, E. D. 1877 K, p. 89.
 1880 C, pp. 78, 79. (*Amblyctonidæ*.)
 1882 E, pp. 157, 158. (*Amblyctonidæ*.)
 1884 O, pp. 259, 260, 739. (*Amblyctonidæ*.)
 Haeckel, E. 1895 A, pp. 578, 583. (*Palæonictida*.)
 Osborn, H. F. 1893 D, p. 33. (*Palæonictidæ*.)
 Osborn and Wortman 1892 A, p. 103. (*Palæonictidæ*.)

- Roger, O. 1896 A, p. 37. (*Palæonictidæ*.)
 Schlosser, M. 1886 C.
 Scott, W. B. 1892 B, pp. 294, 311. (*Palæonictidæ*.)
 1892 D, pp. 77, 79. (*Palæonictidæ*.)
 Trouessart, E. L. 1897 A, p. 229. (*Palæonictidæ*.)
 Winge, H. 1895 B, pp. 47, 52, 91. (*Palæonictidæ*.)
 Wortman, J. L. 1899 A, p. 140. (*Palæonictidæ*.)
 Zittel, K. A. 1893 B, p. 595. (*Palæonictidæ*.)

PALÆONICTIS Blainv. Type *P. gigantea* Blainv.

- Blainville, H. M. D. 1864 A (1841), ii, N, p. 79.
 Cope, E. D. 1876 A, p. 3.
 1877 K, p. 88. (*Palæonyctis*.)
 1884 O, p. 260. (*Palæonyctis*.)
 Gervais, P. 1859 A, p. 225.
 Gaudry, A. 1878 B, p. 18.
 Osborn, H. F. 1892 A.
 1893 E.

- Osborn, H. F. 1893 H.
 1893 I, p. 321.
 Osborn and Wortman 1892 A, pp. 81, 96, 100, 104.
 Pictet, F. J. 1853 A, p. 212.
 Schlosser, M. 1887 B, p. 211.
 Scott, W. B. 1892 A, p. 418.
 1892 B, p. 311.
 1892 D, p. 79.

Winge, H. 1895 B, pp. 47, 52, 91, 93, 100, 101.
 Wortman, J. L. 1894 A, p. 156.
 Zittel, K. A. 1893 B, p. 595.

Palæonictis occidentalis Osb. and Wort.

Osborn and Wortman 1892 A, p. 104, pl. iv.

AMBLOCTONUS Cope. Type *A. sinosus* Cope.

Cope, E. D. 1875 C, pp. 5, 7.

1876 A.

1877 K, pp. 87, 90.

1880 C, p. 79. (*Amblyctonus*.)

1882 E, p. 158. (*Amblyctonus*.)

1884 O, p. 260. (*Amblyctonus*.)

1887 S, p. 251. (*Amblyctonus*.)

1889 C, p. 190. (*Amblyctonus*.)

Flower and Lydekker 1891 A, p. 609. (*Amblyctonus*.)

Nicholson and Lydekker 1889 A, p. 1453. (*Amblyctonus*.)

Osborn, H. F. 1893 H, p. 436.

Osborn and Wortman 1892 A, pp. 81, 99, 104.

Schlosser, M. 1887 B, p. 206.

Matthew, W. D. 1899 A, p. 31.

Osborn, H. F. 1893 H, p. 435, fig. 1.

Roger, O. 1896 A, p. 37.

Trouessart, E. L. 1897 A, p. 230.

Zittel, K. A. 1893 B, p. 595, fig. 499.

Eocene (Wasatch); Wyoming.

Scott, W. B. 1892 B, p. 312.

1892 D, p. 80.

Zittel, K. A. 1893 B, p. 596. (*Amblyctonus*.)

Ambloctonus sinosus Cope.

Cope, E. D. 1875 C, p. 8.

1877 K, p. 91, pl. xxxiii.

1881 J, p. 546, fig. 5. (*Amblyctonus*.)

1884 O, p. 361. (*Amblyctonus*.)

1884 S, p. 265, fig. 4. (*Amblyctonus*.)

Matthew, W. D. 1899 A, p. 31. (*Amblyctonus*.)

Osborn and Wortman 1892 A, p. 106, fig. 8.

Roger, O. 1896 A, p. 37.

Trouessart, E. L. 1897 A, p. 230.

Eocene (Wasatch); New Mexico.

HYÆNODONTIDÆ.

Cope, E. D. 1875 L, p. 22.

1877 K, p. 89. (*Oxyænida*.)

1880 C, pp. 78, 79. (*Oxyænida*.)

1882 E, pp. 156, 158. (*Oxyænida*.)

1884 O, pp. 259, 260. (*Oxyænida*.)

1884 S, pp. 261, 480. (*Oxyænida*.)

1886 L, p. 965.

Flower and Lydekker 1891 A, p. 608.

Gill, T. 1872 B, pp. 59, 68.

Haeckel, E. 1895 A, pp. 578, 583. (*Hyænodontida*.)

Leidy, J. 1871 C, p. 342.

Lydekker, R. 1884 A, p. 348.

1885 B, p. 20.

1885 E.

Nicholson and Lydekker 1889 A, p. 1450.

Osborn, H. F. 1893 D.

1900 I, p. 276. (*Oxyænida*.)

Osborn and Wortman 1892 A, p. 104.

Roger, O. 1896 A, p. 37.

Schlosser, M. 1886 C. (*Oxyænida*, *Hyænodontida*.)

Scott, W. B. 1888 B, p. 184.

1892 A, p. 419.

1892 B, pp. 294, 313.

1892 D, pp. 77, 79.

1894 F.

1895 F, p. 720.

Steinmann and Döderlein 1890 A, p. 714.

Trouessart, E. L. 1897 A, p. 230.

Winge, H. 1895 B, pp. 46, 48, 50, 91. (*Hyænodontida*.)

Wortman, J. L. 1899 A, p. 139. (*Oxyænida*, *Hyænodontida*.)

Zittel, K. A. 1893 B, p. 596.

OXYÆNINÆ.

Osborn, H. F. 1900 I, p. 276. (*Oxyænida*.)

Schlosser, M. 1886 C. (*Oxyænida*.)

Wortman, J. L. 1899 A, p. 139. (*Oxyænida*.)

OXYÆNA Cope. Type *O. lupina* Cope.

Cope, E. D. 1874 O, p. 11.

1875 C, p. 9,

1875 L.

1876 A.

1877 K, pp. 87, 95.

1880 C, p. 79.

1882 E, p. 158.

1882 S, p. 480.

1884 E.

1884 O, pp. 260, 313.

1887 S, p. 251.

Flower and Lydekker 1891 A, p. 608.

Lydekker, R. 1885 B, p. 35.

Matthew, W. D. 1898 A, p. 880.

Nicholson and Lydekker 1889 A, p. 1451. (*Oxyænina*.)

Osborn, H. F. 1900 I, p. 269.

Osborn and Wortman 1892 A, p. 108.

Schlosser, M. 1887 B, p. 204.

1890 B, pp. 36, 71.

Scott, W. B. 1888 B, p. 184.

1892 A, p. 418.

1892 B, p. 314.

1892 D, p. 79.

Winge, H. 1895 B, pp. 47, 53, 91, 93, 101.

Wortman, J. L. 1894 A, p. 152.

Zittel, K. A. 1893 B, p. 597.

Oxyæna forcipata Cope.

- Cope, E. D. 1874 O, p. 12.
 1875 C, p. 9.
 1876 A.
 1877 K, pp. 72, 105, pls. xxxv, figs. 7-12; pl. xxxvi; pl. xxxvii, figs. 1-5.
 1882 E, p. 164.
 1884 O, p. 318, pl. xxivb, figs. 11-15; pl. xxivc, figs. 1-18.
 1884 S, pp. 260, 482, figs. 3, 25.
 King, C. 1878 A, p. 376.
 Matthew, W. D. 1899 A, p. 31.
 Osborn, H. F. 1897 G, p. 255.
 Osborn and Wortman 1892 A, p. 109.
 Roger, O. 1896 A, p. 37.
 Trouessart, E. L. 1897 A, p. 230.

Eocene (Wasatch); New Mexico, Wyoming.

From a remark by Dr. Wortman (1899 A, p. 140) we may infer that a part, or most probably all, of the remains described by Cope in 1884 O, p. 318, as *O. forcipata* belong to *O. lupina*.

Oxyæna huerfanensis Osb.

- Osborn, H. F. 1897 G, p. 255.
 Matthew, W. D. 1899 A, p. 35.
 Trouessart, E. L. 1899 A, p. 1290.
 Eocene (Wind River); Colorado.

PATRIOFELIS Leidy.

- Leidy, J. 1870 G, p. 11.
 Cope, E. D. 1880 C, p. 79.
 1880 N, p. 745. (Protopsalis, type *P. tigrinus* Cope.)
 1881 D, p. 193. (Protopsalis.)
 1882 E, p. 158. (Patriofelis, Protopsalis.)
 1884 O, p. 260 (Patriofelis); pp. 260, 321 (Protopsalis).
 1884 S, p. 480 (Protopsalis); p. 483 (Patriofelis).
 Leidy, J. 1871 C, p. 344.
 1873 B, p. 114.
 Marsh, O. C. 1872 I, p. 202. (Limnofelis, type *L. jerox*.)
 1872 O, p. 406. (Oreocyon, type *O. latidens*.)
 1877 E. (Oreocyon, Limnofelis.)
 Nicholson and Lydekker 1889 A, p. 1452. (Protopsalis.)
 Osborn, H. F. 1893 H, p. 436.
 1896 C, pp. 705, 710, illus. 1.
 1898 Q, p. 15.
 1900 I, p. 269.
 Schlosser, M. 1887 B, p. 210. (Patriofelis, Protopsalis.)
 1890 B, p. 36. (Protopsalis.)
 Scott, W. B. 1892 B, p. 313 (Patriofelis); p. 316 (Protopsalis).
 1892 D, p. 79 (Protopsalis); p. 80 (Patriofelis).
 1894 F, p. 533.
 Winge, H. 1895 B, p. 97.
 Woodward, A. S. 1898 B, p. 384.
 Wortman, J. L. 1894 A.
 Zittel, K. A. 1893 B, p. 596 (Patriofelis); p. 597 (Protopsalis).

Patriofelis ferox (Marsh).

- Marsh, O. C. 1872 I, p. 202. (Limnofelis.)

Oxyæna lupina Cope.

- Cope, E. D. 1874 O, p. 11.
 1875 C.
 1877 K, p. 101, pl. xxxiv, figs. 14-17; pl. xxxv, figs. 1-4.
 King, C. 1878 A, p. 376.
 Matthew, W. D. 1899 A, p. 31.
 Osborn, H. F. 1900 I, p. 276.
 Osborn and Wortman 1892 A, p. 108, fig. 9.
 Roger, O. 1896 A, p. 37.
 Trouessart, E. L. 1897 A, p. 597, fig. 501.
 Wortman, J. L. 1899 A, p. 140, pl. vii; text figs. 1, 2.
 Eocene (Wasatch); New Mexico, Wyoming.

Oxyæna morsitans Cope.

- Cope, E. D. 1874 O, p. 12.
 1875 C, p. 9.
 1877 K, p. 98, pl. xxxiv, figs. 1-13.
 1881 J, p. 546, fig. 6.
 1884 S, p. 263, fig. 5.
 1889 C, p. 190.
 Matthew, W. D. 1899 A, p. 31.
 Roger, O. 1896 A, p. 37.
 Trouessart, E. L. 1897 A, p. 230.
 Eocene (Wasatch); New Mexico.

Type *P. ulta* Leidy.

- King, C. 1878 A, p. 403.
 Lydekker, R. 1896 B, p. 372, fig. 77.
 Matthew, W. D. 1899 A, p. 41.
 Osborn, H. F. 1898 Q, p. 10.
 1900 I, p. 276, figs. 2, 4-8.
 Roger, O. 1896 A, p. 37.
 Schlosser, M. 1890 B, p. 63. (Limnofelis.)
 Scott, W. B. 1892 B, p. 316. (Syn.? of Protopsalis tigrinus.)
 Trouessart, E. L. 1897 A, p. 230.
 Woodward, A. S. 1898 B, p. 384, fig. 215.
 Wortman, J. L. 1894 A, pl. i, text figs. 1-5.
 Eocene (Bridger); Wyoming.

Patriofelis latidens (Marsh).

- Marsh, O. C. 1872 I, p. 203. (Limnofelis.)
 1872 O, p. 406. (Oreocyon.)
 Matthew, W. D. 1899 A, p. 41.
 Schlosser, M. 1890 B, p. 63. (Limnofelis.)
 Scott, W. B. 1892 B, p. 313. (Syn. of *P. ulta*.)
 Trouessart, E. L. 1897 A, p. 230. (Syn. of *P. ulta*.)
 Wortman, J. L. 1894 A, p. 129.
 Eocene (Bridger); Wyoming.
 A doubtful species.

Patriofelis tigrina (Cope).

- Cope, E. D. 1880 N, p. 745. (Protopsalis.)
 1881 D, p. 193. (Protopsalis.)
 1884 O, pp. 260, 322, pl. xxvb, figs. 1-7. (Protopsalis.)
 1884 S, p. 483, fig. 27. (Protopsalis.)
 Matthew, W. D. 1899 A, p. 35.
 Osborn, H. F. 1900 I, p. 277, fig. 7 B. (Protopsalis.)
 Roger, O. 1896 A, p. 38. (Protopsalis.)
 Schlosser, M. 1887 B, p. 210. (Protopsalis.)
 Scott, W. B. 1888 B, p. 174. (Protopsalis.)
 1892 B, 316. (Protopsalis.)
 Trouessart, E. L. 1897 A, p. 231. (Protopsalis.)

Wortman, J. L. 1894 A, p. 130.
Eocene (Wind River); Wyoming.

Patriofelis ulta Leidy.

Leidy, J. 1870 G, p. 11.
1871 C, p. 344.
1872 B, p. 355.
1873 B, pp. 114, 316, pl. ii, fig. 10.
Matthew, W. D. 1899 A, p. 41.

Osborn, H. F. 1897 G, p. 25.
1900 I, p. 279.
Osborn and Wortman 1892 A, p. 97.
Roger, O. 1896 A, p. 37.
Scott, W. B. 1892 B, p. 313.
Trouessart, E. L. 1897 A, p. 230.
Wortman, J. L. 1894 A, pp. 129, 130, 164.
Eocene (Bridger); Wyoming.

HYÆNODONTINÆ.

Schlosser, M. 1886 C. (Hyænodontidæ.)
Winge, H. 1895 B, p. 46. (Hyænodontini.)

Wortman, J. L. 1899 A, p. 139. (Hyænodontidæ.)

HYÆNODON Laizer and Parieu. Type *H. leptorhynchus* Laizer and Parieu.

Laizer and Parieu 1839 A.
Blainville, H. M. D. 1864 A, II, L, p. 55, pl. XII, figs. 1-5. (Taxotherium.)
Cope, E. D. 1875 C, p. 5.
1883 I, p. 79.
1884 O, p. 739.
1884 S, p. 344.
1886 L, p. 966.
1888 D.
Farr, M. S. 1896 A, p. 163.
Filhol, H. 1876 A, p. 169.
Flower, W. H. 1876 B, xiii, p. 514.
Flower and Lydekker 1891 A, p. 608.
Gaudry, A. 1878 B, p. 13.
Gervais, P. 1859 A, p. 232.
Giebel, C. G. 1847 A, p. 43.
Leidy, J. 1869 A, p. 38.
1871 C, p. 342.
Lydekker, R. 1884 A, p. 348.
1885 B, p. 21.
1900 A, p. 927.
Marsh, O. C. 1877 E.
Nicholson and Lydekker 1889 A, p. 1450.
Osborn and Wortman 1894 A, p. 224.
Owen, R. 1852 B.
1868 A, p. 340.
Pictet, F. J. 1853 A, p. 196.
Pomel, A. 1853 A, p. 115.
Schlosser, M. 1887 B, p. 173.
Scott, W. B. 1888 B, pp. 164, 175.
1892 A, p. 419.
1892 B, p. 317.
1892 D, p. 79.
1894 F.
1895 B.
Trouessart, E. L. 1897 A, p. 232.
Vasseur, G. 1874 A.
Wilckens, M. 1885 D, p. 490.
Winge, H. 1895 B, pp. 46, 50, 91, 100, 101.
Woodward, A. S. 1898 B, p. 385.
Wortman, J. L. 1894 A, p. 155.
Zittel, K. A. 1893 B, p. 599.

Hyænodon crucians Leidy.

Leidy, J. 1853 D, p. 393.
Cope, E. D. 1874 B, p. 505.
Hayden, F. V. 1858 B, p. 158.
King, C. 1878 A, p. 411.

Leidy, J. 1869 A, pp. 48, 369, pl. ii.
1871 C, p. 342.
Matthew, W. D. 1899 A, p. 53.
Osborn and Wortman 1894 A, p. 224.
Roger, O. 1896 A, p. 40.
Scott, W. B. 1888 B, p. 175.
1892 B, p. 318.
1894 F.
Trouessart, E. L. 1897 A, p. 234.
Oligocene (White River); South Dakota.

Hyænodon cruentus Leidy.

Leidy, J. 1853 D, p. 393.
Hayden, F. V. 1858 B, p. 158.
King, C. 1878 A, p. 411.
Leidy, J. 1869 A, pp. 47, 369, pl. v, figs. 10, 11.
1871 C, p. 342.
Matthew, W. D. 1899 A, p. 53.
Osborn and Wortman 1894 A, p. 224.
Roger, O. 1896 A, p. 40.
Scott, W. B. 1888 B, p. 175, pl. vi, fig. 2.
1894 F, figs. 1-4, 6, 7, 10.
1895 B, pl. xii A.
Trouessart, E. L. 1897 A, p. 234.
Woodward, A. S. 1898 B, p. 387, fig. 217.
Oligocene (White River); South Dakota, Colorado.

Hyænodon horridus Leidy.

Leidy, J. 1853 D, p. 392.
Cope, E. D. 1874 B, p. 505.
1884 S, p. 346, fig. 12.
Flower, W. H. 1876 C, p. 120.
Hayden, F. V. 1858 B, p. 158.
King, C. 1878 A, p. 411.
Leidy, J. 1869 A, pp. 39, 369, pl. iii.
1871 C, p. 342.
Matthew, W. D. 1899 A, p. 53.
Osborn and Wortman 1894 A, p. 224.
Roger, O. 1896 A, p. 40.
Scott, W. B. 1888 B, p. 175, pl. vii, figs. 4-6.
1894 F, fig. 5.
1895 B, p. 442.
Scott and Osborn 1887 B, p. 151.
Trouessart, E. L. 1897 A, p. 234.
Wortman, J. L. 1886 A, p. 421, fig. 203.
Zittel, K. A. 1893 B, p. 601, fig. 505.
Oligocene (White River); South Dakota.

Hyænodon leptcephalus Scott.

Scott, W. B. in Scott and Osborn 1887 B, p. 152, text fig. 1.

Matthew, W. D. 1899 A, p. 53.

Osborn and Wortman 1894 A, p. 224.

Roger, O. 1896 A, p. 40.

Scott, W. B. 1888 B, p. 175.
1894 F.

Trouessart, E. L. 1897 A, p. 234.

Oligocene (White River); South Dakota.

Hyænodon mustelinus Scott.

Scott, W. B. 1894 F, p. 499.

Oligocene (White River); South Dakota.

Hyænodon paucidens Osb. and Wort.

Osborn and Wortman 1894 A, p. 223.

Matthew, W. D. 1899 A, p. 53.

Roger, O. 1896 A, p. 40.

Scott, W. B. 1894 F.

Trouessart, E. L. 1897 A, p. 234.

Oligocene (White River); South Dakota.

HEMIPSALODON Cope. Type *H. grandis* Cope.

Cope, E. D. 1885 H, p. 163.

1891 A, p. 6.

Nicholson and Lydekker 1889 A, p. 1452.

Scott, W. B. 1892 B, p. 316.

1892 D, p. 79.

1894 F, p. 535.

Zittel, K. A. 1893 B, p. 598.

Hemipsalodon grandis Cope.

Cope, E. D. 1885 H, p. 163.

Ami, H. M. 1891 A.

Cope, E. D. 1886 U, p. 80.

1889 I, p. 151.

1891 A, p. 6, pls. ii, iii.

Matthew, W. D. 1899 A, p. 53.

Roger, O. 1896 A, p. 38.

Scott, W. B. 1892 B, p. 317.

Trouessart, E. L. 1897 A, p. 231.

Oligocene (White River); Northwest Territory, Canada.

OXYÆNODON Matth. Type *O. dysodus* Matth.

Matthew, W. D. 1899 A, p. 49. (Reference to figured specimen.)

Osborn, H. F. 1900 I, p. 278.

Wortman, J. L. 1899 A, p. 145.

Oxyænodon dysodus Matth.

Matthew, W. D. 1899 A, p. 49. (Reference to figured specimen.)

Osborn, H. F. 1895 A, p. 78, fig. 3. ("? Hyænodon.")

Eocene (Uinta); Utah.

Oxyænodon dysclerus nom. nov.

Wortman, J. L. 1899 A, p. 145, fig. 3. (*O. dysodus*, not of Matthew.)

Eocene (Uinta); Utah.

It is by no means certain that this species belongs to the genus *Oxyænodon*, as represented by the type jaw.

UINTACYONIDÆ.

The following authors call this family

Miacidæ.

Cope, E. D. 1880 C, pp. 78, 79.

1882 E, pp. 156, 157.

1884 O, pp. 259, 260.

1884 S, p. 483.

1886 L, p. 966.

1888 K, p. 163.

1888 EE, p. 163.

Matthew, W. D. 1897 C, p. 286.

1899 A, p. 49. (Canidæ, in part.)

Nicholson and Lydekker 1889 A, p. 1437.

Roger, O. 1896 A, p. 40.

Schlosser, M. 1886 C.

Scott, W. B. 1888 A.

1888 B, p. 173.

1892 A, p. 419.

1892 B, pp. 294, 318.

1892 D, pp. 77, 80.

1895 F, p. 720.

Steinmann and Döderlein 1890 A, p. 716.

Trouessart, E. L. 1897 A, p. 234.

Zittel, K. A. 1893 B, p. 602.

UINTACYON Leidy. Type *U. edax* Leidy.

Leidy, J. 1872 J, p. 277.

Ameghino, F. 1896 A, p. 454. (Miacis, in part.)

Cope, E. D. 1880 C, p. 79.

1882 E, p. 157.

1884 O, pp. 260, 301. (Miacis, in part.)

1884 S, p. 483. (Miacis, in part.)

Leidy, J. 1873 B, p. 118. (Uintacyon.)

Matthew, W. D. 1897 C, p. 286. (Miacis, in part.)

Nicholson and Lydekker 1889 A, p. 1437. (Miacis, in part.)

Osborn, H. F. 1892 I. (Miacis, in part.)

Osborn and Wortman 1892 A, pp. 95, 110. (Miacis, in part.)

Schlosser, M. 1888 B, p. 58 (Miacis); p. 61 (Uintacyon).

1890 B, p. 60. (Miacis, in part.)

1899 B, p. 146.

Scott, W. B. 1888 B, p. 173. (Miacis, in part.)

1890 A, p. 473. (Miacis, in part.)

1892 B, p. 320. (Miacis, in part.)

- Scott, W. B. 1892 D, p. 80. (Miakis, in part.)
 1898 B, p. 363. (Miakis, in part.)
 Trouessart, E. L. 1897 A, p. 235. (Miakis, in part.)
 Winge, H. 1895 B, pp. 46, 52, 91, 92. (Miakis, in part.)
 Wortman and Matthew 1899 A, p. 110.
 Zittel, K. A. 1893 B, p. 602. (Miakis, in part.)

Uintacyon bathygnathus (Scott).

- Scott, W. B. 1888 B, p. 172. (Miakis.)
 Matthew, W. D. 1899 A, p. 40.
 Roger, O. 1896 A, p. 41. (Miakis.)
 Schlosser, M. 1887 B, p. 59. (Miakis.)
 Scott, W. B. 1889 B, p. 220. (Miakis.)
 1892 B, p. 320. (Miakis.)
 Trouessart, E. L. 1897 A, p. 235. (Miakis.)
 Eocene (Bridger); Wyoming.

Uintacyon brevirostris (Cope.)

- Cope, E. D. 1881 D, p. 190. (Miakis.)
 1882 E, p. 158. (Miakis.)
 1884 O, pp. 302, 303. (Miakis.)
 1884 S, p. 484, fig. 28. (Miakis.)
 Matthew, W. D. 1899 A, pp. 30, 35.
 Osborn and Wortman 1892 A, pp. 83, 111. (Miakis.)
 Roger, O. 1896 A, p. 41. (Miakis.)
 Scott, W. B. 1892 B, p. 320. (Miakis.)
 Trouessart, E. L. 1897 A, p. 236. (Miakis.)
 Wortman and Matthew 1899 A, p. 112.
 Eocene (Wind River, Wasatch); Wyoming.

Uintacyon canavus (Cope).

- Cope, E. D. 1881 D, p. 189. (Miakis.)
 1882 E, p. 158. (Miakis.)
 1884 O, p. 302. (Miakis.)
 Matthew, W. D. 1899 A, pp. 30, 35. (Uintacyon.)
 Osborn and Wortman 1892 A, p. 110. (Miakis.)
 Roger, O. 1896 A, p. 41. (Miakis.)
 Scott, W. B. 1892 B, p. 320. (Miakis.)
 Trouessart, E. L. 1897 A, p. 236. (Miakis.)
 Wortman and Matthew 1899 A, p. 112.
 Eocene (Wasatch and Wind River); Wyoming.

PRODAPHÆNUS Matth. Type *P. vintensis* (Osb.).

- Matthew, W. D. 1899 A, p. 49. (April 8.)
 Wortman and Matthew 1899 A, p. 114. (June 21.)

Prodaphænus scotti Wort. and Matth.

- Wortman and Matthew 1899 A, p. 115.
 Matthew, W. D. 1899 A, p. 49. (Name only.)
 Eocene (Uinta); Wyoming.

PROCYNODICTIS Wort. and Matth. Type *P. vulpiceps* Wort. and Matth.

- Wortman and Matthew 1899 A, p. 121.
 Put in this family provisionally.

Uintacyon edax Leidy.

- Leidy, J. 1872 J, p. 277.
 Cope, E. D. 1884 O, p. 303. (Miakis.)
 1887 Q. (Miakis.)
 King, C. 1878 A, p. 403. (Uintacyon.)
 Leidy, J. 1873 B, pp. 118, 316, pl. xxvii, figs. 6-10. (Uintacyon.)
 Matthew, W. D. 1899 A, p. 40. (Uintacyon.)
 Osborn and Wortman 1892 A, pp. 83, 110. (Miakis.)
 Roger, O. 1896 A, p. 40. (Miakis.)
 Schlosser, M. 1888 B, p. 61.
 Scott, W. B. 1892 B, p. 320. (Miakis.)
 Trouessart, E. L. 1897 A, p. 235. (Miakis.)
 Wortman and Matthew 1899 A, p. 114.
 Eocene (Bridger); Wyoming.

Uintacyon promicrodon Wort. and Matth.

- Wortman and Matthew 1899 A, p. 111.
 Eocene (Wasatch); Wyoming.

Uintacyon pugnax Wort. and Matth.

- Wortman and Matthew 1899 A, p. 114.
 Eocene; Wyoming.

Uintacyon vorax Leidy.

- Leidy, J. 1872 J, p. 277.
 Cope, E. D. 1884 O, p. 302. (Miakis.)
 Leidy, J. 1873 B, pp. 120, 316, pl. xxvii, figs. 11-13. (Uintacyon.)
 Matthew, W. D. 1899 A, pp. 35, 40. (Uintacyon.)
 Roger, O. 1896 A, p. 40. (Miakis.)
 Schlosser, M. 1888 B, p. 61.
 Trouessart, E. L. 1897 A, p. 235. (Miakis.)
 Wortman and Matthew 1899 A, p. 113.
 Eocene (Wind River, Bridger); Wyoming.

Uintacyon vulpinus Scott and Osb.

- Scott and Osborn 1887 A, p. 255. (Amphicyon.)
 Matthew, W. D. 1899 A, p. 49. (Miakis.)
 Roger, O. 1896 A, p. 41. (Miakis.)
 Scott, W. B. 1890 A, p. 474. (Miakis.)
 1892 B, p. 321. (Miakis.)
 Trouessart, E. L. 1897 A, p. 236. (Miakis.)
 Eocene (Uinta); Utah.

Prodaphænus uintensis (Osb.).

- Osborn, H. F. 1895 A, p. 77, fig. 2. (Miakis.)
 Matthew, W. D. 1899 A, p. 49.
 Roger, O. 1896 A, p. 41. (Miakis.)
 Scott, W. B. 1898 B, p. 363, fig. 1?. (Miakis.)
 Trouessart, E. L. 1897 A, p. 236. (Miakis.)
 Eocene (Uinta); Utah.

Procynodictis vulpiceps Wort. and Matth.

- Wortman and Matthew 1899 A, p. 121, figs. 7, 8.
 Matthew, W. D. 1899 A, p. 49. (No description.)
 Eocene (Uinta); Utah.

THINOCYON Marsh. Type *T. velox* Marsh.

- Marsh, *O. C.* 1872 I, p. 204.
 Schlosser, M. 1890 B, p. 64.
 Scott, W. B. 1892 B, p. 321.
 Zittel, K. A. 1893 B, p. 602. (Syn.? of *Miacis*.)

Thinocyon velox Marsh.

- Marsh, *O. C.* 1872 I, p. 204.

- Matthew, W. D. 1899 A, p. 40.
 Roger, O. 1896 A, p. 41.
 Schlosser, M. 1890 B, p. 63.
 Scott, W. B. 1892 B, p. 321.
 Trouessart, E. L. 1897 A, p. 237.
 Eocene (Bridger); Wyoming.

VULPAVUS Marsh. Type *V. palustris* Marsh.

- Marsh, *O. C.* 1871 E, p. 124.
 Cope, E. D. 1872 E, p. 470. (*Miacis*, type *M. parvivorus*.)
 1873 E, p. 561. (*Miacis*, *Viverravus*.)
 1880 C, p. 79. (*Miacis*.)
 1882 E, p. 157. (*Miacis*.)
 1884 O, pp. 260, 301. (*Miacis*, in part.)
 Matthew, W. D. 1899 A, p. 39.
 Nicholson and Lydekker 1889 A, p. 1437. (*Miacis*, in part.)
 Osborn and Wortman 1892 A, pp. 95, 110. (*Miacis*, in part.)
 Schlosser, M. 1899 B, p. 60 (*Miacis*); p. 64. (*Vulpavus*.)
 Scott, W. B. 1888 B, p. 173. (*Miacis*, in part.)
 1890 A, p. 473. (*Miacis*, in part.)
 1892 B, p. 320. (*Miacis*, in part.)
 1892 D, p. 80. (*Miacis*, in part.)
 1898 B, p. 363. (*Miacis*, in part.)
 Trouessart, E. L. 1897 A, p. 236. (Syn.? of *Miacis*.)
 Winge, H. 1895 B, pp. 46, 52, 91, 92. (*Miacis*, in part.)
 Wortman and Matthew 1899 A, p. 110.
 Zittel, K. A. 1893 B, p. 602. (= ? *Miacis*.)

Vulpavus palustris Marsh.

- Marsh, *O. C.* 1871 E, p. 124.
 King, C. 1878 A, p. 403.
 Leidy, J. 1872 B, p. 356.
 1873 B, p. 118.
 Matthew, W. D. 1899 A, p. 39.
 Roger, O. 1896 A, p. 41. (*Miacis*?)
 Schlosser, M. 1890 B, p. 62.
 Trouessart, E. L. 1897 A, p. 236. (*Miacis*?)
 Wortman and Matthew 1899 A, p. 118, figs. 4-6.
 Eocene (Bridger); Wyoming.

Vulpavus parvivorus (Cope).

- Cope, E. D. 1872 E, p. 470. (*Miacis*.)
 1873 E, p. 560. (*Viverravus*.)
 1873 U, p. 3. (*Viverravus*.)
 1884 O, pp. 302, 304, pl. xxiv, fig. 12. (*Miacis*.)
 Matthew, W. D. 1899 A, p. 39. (Syn. of *Vulpavus palustris*.)
 Roger, O. 1896 A, p. 40. (*Miacis*.)
 Scott, W. D. 1892 B, p. 320. (*Miacis*.)
 Trouessart, E. L. 1897 A, p. 235. (*Miacis*.)
 Wortman and Matthew 1899 A, pp. 119, 120.
 Eocene (Bridger); Wyoming.

ZIPHACODON Marsh. Type *Z. rugatus* Marsh.

- Marsh, *O. C.* 1872 I, p. 216.
 1877 E. (Name only.)
 Matthew, W. D. 1899 A, p. 40.
 Schlosser, M. 1890 B, p. 64.
 Zittel, K. A. 1893 B, p. 603.

Ziphaeodon rugatus Marsh.

- Marsh, *O. C.* 1872 I, p. 216.
 Roger, O. 1896 A, p. 42.
 Schlosser, M. 1890 B, p. 64.
 Trouessart, E. L. 1897 A, p. 237.
 Eocene (Bridger); Wyoming.

HARPALODON Marsh. Type *H. sylvestris* Marsh.

- Marsh, *O. C.* 1872 I, p. 216.
 Schlosser, M. 1890 B, p. 64.
 Zittel, K. A. 1898 A, p. 603.

Harpalodon sylvestris Marsh.

- Marsh, *O. C.* 1872 I, p. 216,
 Matthew, W. D. 1899 A, p. 40.
 Roger, O. 1896 A, p. 42.
 Schlosser, M. 1890 B, p. 64.
 Trouessart, E. L. 1897 A, p. 231.
 Eocene (Bridger); Wyoming.

Harpalodon vulpinus Marsh.

- Marsh, *O. C.* 1872 I, p. 217.
 Matthew, W. D. 1899 A, p. 40.
 Roger, O. 1896 A, p. 42.
 Schlosser, M. 1890 B, p. 64.
 Trouessart, E. L. 1897 A, p. 237.
 Eocene (Bridger); Wyoming.

CARCINODON Scott. Type *Mioclanus filholianus* Cope.

Scott, W. B. 1892 B, p. 323.

Matthew, W. D. 1897 C, p. 293.

1899 A, p. 28.

Zittel, K. A. 1893 B, p. 586.

A genus of uncertain position placed by Matthew in Creodonta, "incertæ sedis."

Carcinodon filholianus (Cope).

Cope, E. D. 1888 CC, pp. 303, 329. (Mioclanus.)

Matthew, W. D. 1897 C, pp. 264, 293.

1899 A, p. 28.

Roger, O. 1896 A, p. 41.

Scott, W. B. 1892 B, p. 323.

Trouessart, E. L. 1897 A, p. 237.

Eocene (Puerco); New Mexico.

PARADOXODON Scott. Type *Chriacus rütimeyeranus* Cope.

Scott, W. B. 1892 B, p. 322.

1892 D, p. 80.

Zittel, K. A. 1893 B, p. 586.

A genus of uncertain position.

Paradoxodon rütimeyeranus (Cope).

Cope, E. D. 1888 CC, pp. 304, 323. (Chriacus.)

Matthew, W. D. 1899 A, p. 28. (Mioclanus.)

Roger, O. 1896 A, p. 41.

Scott, W. B. 1892 B, p. 323.

Trouessart, E. L. 1897 A, p. 237.

Eocene (Puerco); New Mexico.

Suborder FISSIPEDIA.

Cope, E. D. 1882 D, pp. 471, 473.

1888 W, p. 1019. (Carnivora vera.)

1889 R, p. 876.

1898 B, p. 118.

Flower, W. H. 1876 B, xiii, p. 487. (Carnivora vera.)

1883 D, p. 433.

Gill, T. 1872 A, p. 297.

1872 B, p. 56.

Gill and Coues 1877 A, p. 1005. [Feræ (Fissipedia).]

Huxley, T. H. 1872 A, p. 351.

Lydekker, R. 1896 B.

Nicholson and Lydekker 1889 A, p. 1424. (Carnivora vera.)

Weber, M. 1886 A, p. 227.

Woodward, A. S. 1898 B, p. 389. (Carnivora vera.)

Zittel, K. A. 1893 B, pp. 606, 678.

Superfamily ARCTOIDEA.

Flower, W. H. 1869 B, p. 15.

Cope, E. D. 1882 D, p. 473. (Hypomycteri, in part.)

1884 O, pp. 890, 892. (Hypomycteri, in part.)

Flower, W. H. 1883 D, p. 439.

Flower and Lydekker 1891 A, p. 556.

Huxley, T. H. 1872 A, p. 358.

Mivart, St. G. 1881 A, p. 474.

1885 B, p. 340.

Schlosser, M. 1888 B, p. 6.

Tims, H. W. M. 1896 B, p. 462.

Tomes, C. S. 1898 A, p. 472.

URSIDÆ.

Albrecht, P. 1879 A.

Baird, S. F. 1857 A, p. 206.

Blainville, H. M. D. 1864 A, ii, K, pls. i-xviii.

Cope, E. D. 1882 D, p. 473.

1884 O, p. 892.

Cuvier, G. 1834 A, ii, p. 171.

Delbos, J. 1858 A.

1860 A.

1860 B.

Flower, W. H. 1869 A, p. 277.

1876 B, xiii, p. 488.

1883 D, p. 441.

1885 A.

Flower and Lydekker 1891 A, p. 557.

Gadow, H. 1898 A, p. 50.

Gill, T. 1872 B, pp. 58, 66.

Gray, J. E. 1869 A, p. 215.

Haeckel, E. 1895 A, p. 585. (Ursida.)

Lydekker, R. 1884 A, p. 202.

1885 B, p. 106, in part.

Mivart, St. G. 1885 B, p. 394.

Nicholson and Lydekker 1889 A, p. 1430.

Owen, R. 1843 A, p. 62.

Owen, R. 1845 B, p. 501.

1866 B, p. 490.

1868 A, p. 335.

Pictet, F. J. 1853 A, p. 183.

Roger, O. 1896 A, p. 52.

Schlosser, M. 1888 A.

1888 B, pp. 3, 14, 15.

1899 B, p. 95.

Scott, W. B. 1888 A.

1892 A.

Steinmann and Döderlein 1890 A, p. 721.

Tornier, G. 1888 A.

1890 A.

Trouessart, E. L. 1897 A, p. 238.

Turner, H. N. 1848 A.

Waterhouse, G. R. 1839 A.

Weyhe, — 1875 A, p. 117.

Winge, H. 1895 B, pp. 47, 63, 91. (Ursidæ, Ursini.)

Woodward, A. S. 1898 B, p. 394.

Zittel, K. A. 1893 B, p. 639.

Ursus Linn. Type *U. arctos* Linn.

- Linnæus, C. 1758, Syst. Nat., ed. 10, i, p. 47.
 Allen, H. 1888 A.
 Baird, S. F. 1857 A, p. 216.
 Blainville, H. M. D. 1864 A, ii, K, pls. i-xviii.
 Burmeister, H. 1879 B, p. 169.
 Delbos, J. 1858 A.

1860 A.

1860 B.

Flower, W. H. 1869 B, p. 6.

1883 D, p. 441.

1885 A.

Flower and Lydekker 1891 A, p. 557.

Gray, J. E. 1869 A, p. 218.

Lydekker, R. 1884 A, p. 206.

1885 B, p. 159.

Merriam, C. H. 1896 A.

Middendorff, A. T. 1850 A.

Mivart, St. G. 1885 B, p. 389.

Nicholson and Lydekker 1889 A, p. 1431.

Owen, R. 1843 A, p. 62.

1846 B, p. 77.

1866 B, p. 490.

1868 A, p. 335.

Pictet, F. J. 1853 A, p. 185.

Schlosser, M. 1888 B, p. 88.

1899 B, p. 95.

1900 A, p. 261.

Scott, W. B. 1892 A, p. 425.

Steinmann and Döderlein 1890 A, p. 722.

Trouessart, E. L. 1897 A, p. 238.

Turner, H. N. 1848 A, p. 75.

Zittel, K. A. 1893 B, p. 641.

Cope, E. D. 1869 E, p. 176.

1895 F, p. 447.

Harlan, R. 1835 C, p. 329.

Leidy, J. 1853 B, p. 303. ("Ursus.")

1856 T, p. 169.

1859 F, p. 111.

1869 A, p. 369.

Merriam, C. H. 1896 A.

Miller, G. S. 1899 A, p. 54. (*U. americanus fossilis*.)

Pictet, F. J. 1853 A, p. 189.

Trouessart, E. L. 1897 A, p. 243.

Wailles, B. L. C. 1854 A, p. 286. (*U. americanus fossilis*.)

Recent; North America. Pleistocene; Kentucky, Mississippi, Pennsylvania.

Ursus amplidens Leidy.

Leidy, J. 1853 B, p. 303.

Cope, E. D. 1869 E, p. 176.

Forshey, C. G. 1846 A, p. 163. ("Polar bear;" species problematical.)

Leidy, J. 1856 T, p. 168, pl. xvii, figs. 13-16.

1869 A, p. 370.

Merriam, C. H. 1896 A.

Miller, G. S. 1899 A, p. 54.

Roger, O. 1896 A, p. 55. (*Arctotherium*.)

Trouessart, E. L. 1897 A, p. 243.

Wailles, B. L. C. 1854 A, p. 286.

Wortman, J. L. 1882 A. (*U. amplidens*=*U. ferox*.)

Zittel, K. A. 1893 B, p. 643.

Pleistocene; Mississippi, Virginia.

Ursus procerus Miller.

Miller, G. S. 1899 A, p. 55.

Pleistocene; Ohio.

Ursus americanus Pallas.

Allen, J. A. 1876 C, p. 333.

Baird, S. F. 1857 A, p. 225, pl. xliii, figs. 10, 13.

Arctodus Leidy. Type *A. pristinus* Leidy.

Leidy, J. 1854 C, p. 90.

Ameghino, F. 1889 A, p. 315. (*Arctotherium*.)Bravard, 1860, Cat. Foss. Amer. Merid., p. 8. (*Arctotherium*.)Cope, E. D. 1871 I, p. 96. (*Ursus*.)1899 A, p. 221. (*Tremarctos*.)Flower and Lydekker 1891 A, p. 561. (*Arctotherium*.)Gervais, P., 1855, Hist. Nat. Mamm., ii, p. 20. (*Tremarctos*, type *T. ornatus*.)Gervais and Ameghino 1880 A, p. 23. (*Arctotherium*.)Lydekker, R. 1884 A, p. 236. (*Arctotherium*.)1885 B, p. 157. (*Arctotherium*.)Nicholson and Lydekker 1889 A, p. 1429 (*Arctodus*); p. 1432 (*Arctotherium*.)Steinmann and Döderlein 1890 A, p. 722. (*Arctotherium*.)Zittel, K. A. 1893 B, p. 641. (*Arctotherium*.)

Arctodus haplodon (Cope).

Cope, E. D. 1896 F, p. 383. [*Ursus* (*Tremarctus*).]
 1871 F, p. 15. (*Ursus pristinus*, not of Leidy.)1871 I, p. 96. (*Ursus pristinus*.)1871 P, p. 58. (*Ursus pristinus*.)1895 F, p. 447. (*Arctotherium pristinum*.)Cope, E. D. 1899 A, p. 220, pl. xix, figs. 2, 2a. (*Ursus*.)Miller, G. S. 1899 A, p. 54. (*Ursus*.)Trouessart, E. L. 1897 A, p. 245. (*Tremarctos*.)Wheatley, C. M. 1871 A. (*Ursus pristinus*.)

Pleistocene (Port Kennedy Cave); Pennsylvania.

Arctodus pristinus Leidy.

Leidy, J. 1854 C, p. 90. (*Arctodus*.)Cope, E. D. 1896 F, p. 383. (*Ursus*.)1899 A, p. 221. (*Ursus*.)Leidy, J. 1860 B, p. 115, pl. xxiii, figs. 3, 4. (*Arctodus*.)1869 A, p. 370. (*Arctodus*.)Miller, G. S. 1899 A, p. 54. (*Arctodus*.)Roger, O. 1896 A, p. 55. (*Arctodus*.)Trouessart, E. L. 1897 A, p. 246. (*Tremarctos*.)

Pleistocene; South Carolina.

Arctodus simus (Cope).

Cope, E. D. 1879 U, p. 791. (*Arctotherium*.)1891 K, p. 997, pl. xxi. (*Arctotherium*.)1899 A, p. 221. (*Ursus*.)Miller, G. S. 1899 A, p. 54. (*Arctotherium*.)Roger, O. 1896 A, p. 54. (*Arctotherium*.)Trouessart, E. L. 1897 A, p. 245. (*Tremarctos*.)

Pleistocene; California.

PROCYONIDÆ.

- Albrecht, P. 1879 A.
 Allen, H. 1880 A.
 Cope, E. D. 1880 D, p. 833.
 1881 C, p. 165.
 1882 D, p. 473.
 1884 E.
 1884 O, p. 892.
 Flower, W. H. 1869 B, p. 5.
 1883 D, p. 440.
 Flower and Lydekker 1891 A, p. 562.
 Gill, T. 1872 B, pp. 58, 67.
 Gray, J. E. 1869 A, p. 242.
 Hacckel, E. 1895 A, p. 585. (Procyonida.)
- Huxley, T. H. 1880 A.
 Mivart, St. G. 1885 B, p. 393.
 Nicholson and Lydekker 1889 A, 1429.
 Roger, O. 1896 A, p. 55.
 Schlosser, M. 1888 B, p. 3 (Subursi); p. 12 (Procyonidæ).
 1890 B, p. 23. (Subursi.)
 1899 A, p. 94. ("Subursen.")
 Scott, W. B. 1892 A, p. 426.
 Trouessart, E. L. 1897 A, p. 248.
 Winge, H. 1895 B, pp. 47, 63, 91.
 Wortman and Matthew 1899 A, p. 129.
 Zittel, K. A. 1893 B, p. 644.

CERCOLEPTINÆ.

- Blainville, H. M. D. 1864 A, ii, L, p. 20, pls. v, vii-x.
 Cope, E. D. 1882 D, p. 473. (Cerculeptidæ.)
 1884 O, p. 892. (Cerculeptidæ.)
- Gill, T. 1872 B, pp. 58, 67 (Cerculeptidæ); pp. 59, 67 (Bassarididæ).
 Trouessart, E. L. 1897 A, p. 245.

LEPTARCTUS Leidy. Type *L. primus* Leidy.

- Leidy, J. 1856 Q, p. 311.
 1871 C, p. 344.
 Lydekker, R. 1884 A, p. 204.
 Nicholson and Lydekker 1889 A, p. 1429.
 Schlosser, M. 1899 A, p. 84.
 Wortman, J. L. 1895 B, p. 229.
 Zittel, K. A. 1893 B, p. 645.
- Leptarctus primus** Leidy.
 Leidy, J. 1856 Q, p. 311.
 Hayden, F. V. 1858 B, p. 158.
- King, C. 1878 A, p. 430.
 Leidy, J. 1869 A, pp. 70, 370, pl. i, figs. 15, 16.
 1871 C, p. 344.
 Matthew, W. D. 1899 A, p. 67.
 Roger, O. 1896 A, p. 55.
 Schlosser, M. 1899 A, p. 84.
 Trouessart, E. L. 1897 A, p. 248.
 Wortman, J. L. 1894 B, p. 229.
 Zittel, K. A. 1893 B, p. 645.
 Miocene (Loup Fork); South Dakota.

BASSARISCUS Coues. Type *Bassariscus astuta* Licht.

- Coues, E., 1887, Science (2), ix, p. 516.
 Allen, J. A. 1879 A, p. 331. (Bassariscus.)
 Baird, S. F. 1857 A, p. 147. (Bassariscus.)
 Flower, W. H. 1869 B, p. 31. (Bassariscus.)
 Mivart, St. G. 1885 B, p. 361. Bassariscus.)
 Schlosser, M. 1890 B, p. 4. (Bassariscus.)
 1890 C, p. 267. (Bassariscus.)
 1899 A, p. 86. (Bassariscus.)
 Winge, H. 1895 B, pp. 47, 64, 102, 103. (Bassariscus.)
 Wortman and Matthew 1899 A, p. 134.
- Bassariscus astutus** (Licht.).
 Allen, J. A. 1879 A, p. 325. (Bassariscus.)
 Baird, S. F. 1857 A, p. 147, pl. lxxiv, fig. 2. (Bassariscus.)
 Cope, E. D. 1895 F, p. 447.
 Flower, W. H. 1869 B, p. 10, fig. 3a. (Bassariscus.)
 Trouessart, E. L. 1897 A, p. 249.
 Recent; Mexico to Oregon. Pleistocene (Port Kennedy); Pennsylvania, *vide* Cope.

PROCYONINÆ.

PROCYON Storr. Type *Ursus lotor* Linn.

- Storr, G. C. 1780, Prod. Meth. Mamm., p. 35.
 Baird, S. F. 1857 A, p. 207.
 Blainville, H. M. D. 1864 A, ii, L, p. 13, pls. iii, vi.
 Flower, W. H. 1869 B, p. 9.
 1883 D, p. 440.
 Flower and Lydekker 1891 A, p. 564.
 Giebel, C. G. 1857 A, p. 349.
 Gray, J. E. 1869 A, p. 242.
 Huxley, T. H. 1880 A.
 Mivart, St. G. 1885 B, p. 346.
 Nicholson and Lydekker 1889 A, p. 1429.
 Owen, R. 1868 A, p. 334.
 Schlosser, M. 1890 B, p. 23.
 Scott, W. B. 1892 A, p. 426.
- Winge, H. 1895 B, pp. 47, 65, 91.
 Wortman and Matthew 1899 A, p. 133.
 Zittel, K. A. 1893 B, p. 644.
- Procyon lotor** (Linn.).
 Linnaeus, C., 1758, Syst. Nat., ed. 10, i, p. 48. (Ursus.)
 Allen, J. A. 1876 C, p. 333.
 Baird, S. F. 1857 A, p. 209.
 Cope, E. D. 1869 E, p. 176.
 Flower, W. H. 1869 B, p. 10, fig. 3.
 Giebel, C. G. 1857 A, p. 349.
 Leidy, J. 1860 B, p. 115, pl. xxiii, fig. 1.
 1869 A, p. 370.
 1889 H, p. 5.

Trouessart, E. L. 1897 A, p. 251.

Recent; Central and North America. Pleistocene; South Carolina, Virginia, Pennsylvania, New Jersey.

Procyon priscus Le Conte.

Le Conte, J. L. 1848 A, p. 106.

Cope, E. D. 1869 E, p. 176.

Leidy, J. 1856 T, p. 169, pl. xvii, figs. 17-24.

1862 A.

1869 A, p. 370.

1870 H, p. 13.

Pictet, F. J. 1853 A, p. 191.

Roger, O. 1896 A, p. 55.

Trouessart, E. L. 1897 A, p. 251.

Pleistocene; Galena, Illinois.

PHLAOCYON Matth. Type *P. leucosteus* Matth.

Matthew, W. D. 1899 A, p. 54.

Wortman and Matthew 1899 A, p. 129.

Phlaocyon leucosteus Matth.

Matthew, W. D. 1899 A, p. 54.

Wortman and Matthew 1899 A, pp. 129, 131, pl. vi.

Oligocene (White River); Colorado.

MYXOPHAGUS Cope. Type *M. spelæus* Cope.

Cope, E. D. 1869 E, p. 176.

Myxophagus spelæus Cope.

Cope, E. D. 1869 E, p. 176, pl. iii, figs. 2, 2a.

1869 J, p. 3. (No description.)

Leidy, J. 1869 A, p. 445.

Roger, O. 1896 A, p. 55.

Trouessart, E. L. 1897 A, p. 252.

Pleistocene; Virginia.

MUSTELIDÆ.

Albrecht, P. 1879 A.

Baird, S. F. 1857 A, p. 148.

Blainville, H. M. D. 1864 A, ii M, pls. i-xiv.

Cope, E. D. 1875 L, p. 21.

1882 D, p. 473.

1884 O, p. 892.

Coues, E. 1877 A, pp. 1, 4.

Flower, W. H. 1869 B.

1883 D, p. 439.

Flower and Lydekker 1891 A, p. 567.

Gill, T. 1872 B, pp. 58, 64.

Gray, J. E. 1865 A, p. 100.

1869 A, p. 79.

Haeckel, E. 1895 A, p. 587. (Mustelida.)

Humphreys, J. 1889 A, p. 158.

Lydekker, R. 1884 A, p. 178.

Mayer, P. 1886 A, p. 276.

Mivart, St. G. 1885 B, p. 393.

Nicholson and Lydekker 1889 A, p. 1426.

Owen, R. 1845 B, p. 494.

1868 A, p. 333.

Roger, O. 1896 A, p. 56.

Schlosser, M. 1888 B, pp. 3, 14, 107.

1890 C, p. 265.

Scott, W. B. 1892 A, p. 426.

Steinmann and Döderlein 1890 A, p. 723.

Tomes, C. S. 1898 A, p. 472.

Trouessart, E. L. 1897 A, p. 252.

Turner, H. N. 1848 A.

Waterhouse, G. R. 1839 A.

Winge, H. 1895 B, pp. 47, 65, 69, 91.

Woodward, A. S. 1898 B, p. 396.

Zittel, K. A. 1893 B, pp. 645, 654.

MELINÆ.

Blainville, H. M. D. 1864 A, ii, L, p. 2, pls. ii, vi, xii. (Genus Meles.)

Baird, S. F. 1857 A, p. 190.

Coues, E. 1877 A, pp. 5, 9, 10. (Melinæ, Mephitinæ.)

Flower, W. H. 1883 D, p. 439.

Flower and Lydekker 1891 A, p. 572.

Gill, T. 1872 B, p. 64 (Melinæ); p. 65 (Mephitinæ).

Mivart, St. G. 1885 B, p. 394.

Moseley and Lankester 1868 A. (Genus Meles.)

Owen, R. 1868 A, p. 333. (Melidæ.)

Roger, O. 1896 A, p. 60.

Trouessart, E. L. 1897 A, p. 252.

Winge, H. 1895 B, p. 47. (Melinæ.)

Zittel, K. A. 1893 B, p. 650.

TAXIDEA Storr. Type *Ursus taxus* Schreber.

Storr, G. C. 1780, Prod. Meth. Mamm., p. 34.

Baird, S. F. 1857 A, p. 201.

Flower, W. H. 1869 B, p. 11.

1883 D, p. 440.

Flower and Lydekker 1891 A, p. 576.

Gray, J. E. 1865 A, p. 140.

1869 A, p. 129.

Mivart, St. G. 1885 B, p. 367.

Owen, R. 1868 A, p. 333.

Waterhouse, G. R., 1838, Trans. Zool. Soc. Lond., ii, pp. 343.

Winge, H. 1895 B, p. 68.

Taxidea taxus (Schreber).

Baird, S. F. 1857 A, p. 202. (T. americana.)

Cope, E. D. 1899 A, p. 239. (T. americana.)

Gray, J. E. 1865 A, p. 141. (T. americana.)

Mivart, St. G. 1885 B, p. 367. (T. americana.)

Recent. Ohio to Oklahoma, north to Hudson Bay. Pleistocene; Pennsylvania.

Taxidea sulcata Cope.

Cope, E. D. 1878 C, p. 227.

1889 F, p. 162. (Syn. of T. americana.)

Roger, O. 1896 A, p. 61.

Trouessart, E. L. 1897 A, p. 252.

Pleistocene (Equus beds); State of Washington.

MEPHITIS Cuvier. Type "*Les Moufettes*."

- Cuvier, G. 1800, Leçons d'Anat. Comp., i, tabl. i.
 Ameghino, F. 1889 F, p. 322.
 Baird, S. F. 1857 A, p. 191.
 Blainville, H. M. D. 1864 A, ii, M, p. 19, pls. i, ix-xiv.
 Burmeister, H. 1879 B, p. 162.
 Cope, E. D. 1899 A, p. 232.
 Coues, E. 1875 A.
 Filhol, H. 1891 A, p. 109.
 Flower, W. H. 1869 B, p. 11.
 1883 D, p. 439.
 Flower and Lydekker 1891 A, p. 572.
 Gray, J. E. 1865 A, p. 147.
 1869 A, p. 136.
 Mivart, St. G. 1885 B, p. 370.
 Schlosser, M. 1888 B, pp. 113, 114, 140.
 Trouessart, E. L. 1897 A, p. 259.
 Winge, H. 1895 B, pp. 68, 79.
 Zittel, K. A. 1893 B, p. 652.

Mephitis fossidens Cope.

- Cope, E. D. 1896 F, p. 386.
 1899 A, pp. 231, 232, 233, pl. xviii, fig. 7.
 Trouessart, E. L. 1897 A, p. 259.
 Pleistocene; Pennsylvania.

Mephitis frontata Coues.

- Coues, E. 1875 A, p. 7, fig. 1.
 Allen, J. A. 1876 C, p. 333. (Syn. of *M. mephitica*.)
 Coues, E. 1877 A, p. 193.

- Trouessart, E. L. 1897 A, p. 260. (*M. mephitica frontata*.)
 Pleistocene; Pennsylvania.

Mephitis leptops Cope.

- Cope, E. D. 1899 A, pp. 232, 235, pl. xviii, figs. 9, 9a.
 Pleistocene; Pennsylvania.

Mephitis mephitica (Shaw).

- Allen, J. A. 1876 C, p. 333.
 Baird, S. F. 1857 A, p. 195, pl. lx, fig. 1.
 Cope, E. D. 1895 F, p. 447.
 1899 A, p. 232.
 Coues, E. 1875 A, p. 8.
 1877 A, p. 195. (Synonymy and literature.)
 Leidy, J. 1889 H, p. 5.
 Trouessart, E. L. 1897 A, p. 259.
 Recent; Louisiana northward to Nova Scotia and Saskatchewan. Pleistocene; Pennsylvania, *fide* Allen.

Mephitis obtusata Cope.

- Cope, E. D. 1899 A, p. 236.
 Pleistocene; Pennsylvania.

Mephitis orthrostica Cope.

- Cope, E. D. 1896 F, p. 389.
 1899 A, p. 234, pl. xviii, figs. 8, 8a.
 Trouessart, E. L. 1897 A, p. 259.
 Pleistocene; Pennsylvania.

SPIOGALE Gray. Type *Mephitis interrupta* Raf.

- Gray, J. E. 1865 A, p. 150.
 Coues, E. 1877 A, p. 192. (Subgenus.)
 Flower and Lydekker 1891 A, p. 574.
 Merriam, C. H., 1890, N. A. Fauna, no. 4, p. 7.
 Trouessart, E. L. 1897 A, p. 262.

Spilogale perdicida Cope.

- Cope, E. D. 1869 E, p. 177, pl. iii, fig. 1. (Galera.)
 1869 J, p. 3. (Hemiacis.)

- Cope, E. D. 1896 F, p. 386. (Galera.)
 Coues, E. 1875 A, p. 8. (Mephitis.)
 1877 A, p. 18. (Spilogale putorius?).
 Leidy, J. 1869 A, p. 445. (Galera.)
 Roger, O. 1896 A, p. 60. (Galictis.)
 Trouessart, E. L. 1897 A, p. 262. (Syn. of *S. putorius*.)
 Pleistocene; Virginia.

OSMOTHERIUM Cope. Type *O. spelæum* Cope.

- Cope, E. D. 1896 F, p. 385.
 1899 A, p. 230.

Osmotherium spelæum Cope.

- Cope, E. D. 1896 F, p. 385.

- Cope, E. D. 1899 A, p. 231, pl. xviii, fig. 6.
 Trouessart, E. L. 1897 A, p. 260.
 Pleistocene; Pennsylvania.

PELYCICTIS Cope. Type *P. lobulatus* Cope.

- Cope, E. D. 1896 F, p. 390.
 1899 A, p. 237.

Pelycictis lobulatus Cope.

- Cope, E. D. 1896 F, p. 390.

- Cope, E. D. 1899 A, p. 237, pl. xviii, fig. 10; text figure.
 Trouessart, E. L. 1897 A, p. 260.
 Pleistocene; Pennsylvania.

MUSTELINÆ.

- Baird, S. F. 1857 A, p. 148. (Martinae.)
 Flower, W. H. 1883 D, p. 440.
 Flower and Lydekker 1891 A, p. 579.
 Gill, T. 1872 B, p. 64.
 Lydekker, R. 1884 A, p. 178.
 Mivart, St. G. 1885 B, p. 394.

- Roger, O. 1896 A, p. 56.
 Trouessart, E. L. 1897 A, p. 263.
 Turner, H. N. 1848 A.
 Winge, H. 1895 B, pp. 47, 66, 69.
 Zittel, K. A. 1893 B, p. 646.

BUNÆLURUS Cope. Type *B. lagophagus* Cope.

Cope, E. D. 1873 CC, p. 8.

1874 B, p. 507.

1884 O, p. 946.

Trouessart, E. L. 1897 A, p. 264 (Bunælorus); p. 268 (Syn. of Palæogale).

Bunælorus lagophagus Cope.

Cope, E. D. 1873 CC, p. 8.

1873 CC, p. 10. (Canis osorum.)

1874 B, p. 507 (Canis osorum); p. 508 (B. lagophagus).

Cope, E. D. 1884 O, p. 946, pl. lxviii, figs. 13, 14 (Bunælorus; Plesiogale, on plate); p. 947, pl. lxviii, fig. 12 (B. osorum).

Matthew, W. D. 1899 A, p. 54.

Roger, O. 1896 A, p. 44 (Daphænos osorum); p. 59 (Bunælorus lagophagus).

Scott, W. B. 1893 A.

Trouessart, E. L. 1897 A, p. 264 (B. lagophagus, B. osorum); p. 296 (Daphænos osorum).

Zittel, K. A. 1893 B, p. 649.

Oligocene (White River); Colorado.

GALICTIS Bell. Type *Viverra vittata* (Schreber).

Bell, T., 1826, Zool. Journ., ii, p. 551.

Burmeister, H. 1879 B, p. 156.

Cope, E. D. 1867 C, p. 156. (Galera.)

Coues, E. 1877 A, p. 17.

Flower, W. H. 1869 B, p. 12. (Galera.)

Flower and Lydekker 1891 A, p. 579.

Gray, J. E. 1865 A, p. 121. (Galera.)

Mivart, St. G. 1885 B, p. 376.

Nehring, A. 1886 A, p. 177.

Nicholson and Lydekker 1889 A, p. 1423.

Schlosser, M. 1888 B, p. 114.

Zittel, K. A. 1893 B, p. 650.

Galictis macrodon Cope.

Cope, E. D. 1867 C, p. 155. (Galera.)

Cope and Wortman 1884 A, p. 5.

Coues, E. 1877 A, p. 17. (Galera.)

Leidy, J. 1869 A, p. 369, pl. xxx, figs. 1-3. (Galera.)

Roger, O. 1896 A, p. 60.

Trouessart, E. L. 1897 A, p. 264.

Wortman, J. L. 1883 B, p. 1001. (Putorius.)

Pleistocene; Maryland.

STENOGALE Schlosser. Type, none designated.

Schlosser, M. 1888 B, pp. 110, 116, 151.

Cope, E. D. 1890 I, p. 950.

Zittel, K. A. 1893 B, p. 647.

Stenogale robusta Cope.

Cope, E. D. 1890 I, p. 950.

Matthew, W. D. 1899 A, p. 68.

Trouessart, E. L. 1897 A, p. 267.

Miocene (Loup Fork); Nebraska.

PARICTIS Scott. Type *P. primævus* Scott.

Scott, W. B. 1893 A, p. 658. (Parietis, error.)

Parietis primævus Scott.

Scott, W. B. 1893 A, p. 658. (Parietis princeous, error.)

Matthew, W. D. 1899 A, p. 63.

Roger, O. 1896 A, p. 57.

Trouessart, E. L. 1897 A, p. 267.

Miocene (John Day); Oregon.

MUSTELA Linn. Type *M. martes* Linn.

Linnæus, C., 1758, Syst. Nat. ed. 10, i, p. 45.

Baird, S. F. 1857 A, p. 149.

Blainville, H. M. D. 1864 A, ii, M, plates.

Coues, E. 1877 A, p. 59.

Filhol, H. 1891 A, p. 94.

Flower, W. H. 1869 B, p. 13.

Flower and Lydekker 1891 A, p. 94.

Gray, J. E. 1865 A, p. 110.

Lydekker, R. 1885 B, p. 176.

Mivart, St. G. 1885 B, p. 378.

Nicholson and Lydekker 1889 A, p. 1423.

Owen, R. 1868 A, p. 333.

Zittel, K. A. 1893 B, p. 648.

Mustela diluviana Cope.

Cope, E. D. 1899 A, p. 229, pl. xviii, figs. 5, 5a.

Pleistocene; Pennsylvania.

Mustela parviloba (Cope).

Cope, E. D. 1873 C, p. 1. [Ælurodon mustelinus; not Mustela (Plesiogale) mustelina of Pomel.]

1874 B, p. 520. (Martes mustelinus.)

1874 P, p. 11. (Martes mustelinus.)

Coues, E. 1877 A, p. 16. (Mustela mustelina.)

Matthew, W. D. 1899 A, p. 68.

Roger, O. 1896 A, p. 59. (Mustela mustelina.)

Scott and Osborn 1890 B, p. 71. ("M. parviloba Cope.")

Trouessart, E. L. 1897 A, p. 272. (M. parviloba.)

Miocene (Loup Fork); Colorado, Nebraska.

Mustela pennantii Erxleben.

Erxleben, C. P., 1777, Syst. Regn. Anim., p. 470.

Allen, J. A. 1876 C, p. 333.

Baird, S. F. 1857 A, p. 149, pl. xxxvi, fig. 1.

Coues, E. 1877 A, p. 62, pl. ii. (Synonymy and literature.)

Gray, J. E. 1865 A, p. 107. (Martes.)

Trouessart, E. L. 1897 A, p. 272.

Mustela americana Turton.

Allen, J. A. 1876 C, p. 333.

Baird, S. F. 1857 A, p. 152, pl. xxxvii, fig. 1.

Coues, E. 1877 A, p. 81, pl. v. (Synonymy and literature.)

Gray, J. E. 1865 A, p. 106. (Martes.)

Trouessart, E. L. 1897 A, p. 272.

Recent; North America. Pleistocene or Recent, in caves; Pennsylvania, *vide* Allen.

PUTORIUS¹ Cuv. Type *Mustela putorius* Linn.

- Baird, S. F. 1867 A, p. 159.
 Coues, E. 1877 A, p. 96.
 Flower, W. H. 1883 D, p. 440.
 Flower and Lydekker 1891 A, p. 585.
 Gervais, P. 1859 A, p. 251.
 Gray, J. E. 1865 A, p. 109.
 1869 A, p. 87.
 Mivart, St. G. 1885 B, p. 379.
 Owen, R. 1843 A, p. 70.
 Schlosser, M. 1888 B, p. 111.
 Scott, W. B. 1888 A.
 Trouessart, E. L. 1897 A, p. 273.
 Zittel, K. A. 1893 B, p. 649.

Putorius nambianus Cope.

Cope, E. D. 1874 I, p. 147. (Martes.)

- Cope, E. D. 1874 O, p. 16. (Martes.)
 1875 F, p. 68. (Mustela.)
 1877 K, p. 305, pl. lxxix, fig. 3.
 Coues, E. 1877 A, p. 16. (Mustela.)
 Matthew, W. D. 1899 A, p. 68.
 Roger, O. 1896 A, p. 59. (Mustela.)
 Trouessart, E. L. 1897 A, p. 275.
 Miocene (Loup Fork); New Mexico.

Putorius vison (Schreber).

- Allen, J. A. 1876 C, p. 333.
 Baird, S. F. 1857 A, p. 177, pl. xxxvii, figs. 2, 3.
 Coues, E. 1877 A, p. 160. (Synonymy and literature.)
 Trouessart, E. L. 1897 A, p. 274.
 Recent; North America. In caves of Pennsylvania, *vide* Allen.

GULO Storr. Type *Ursus luscus* Linn.

- Baird, S. F. 1857 A, p. 180.
 Blainville, H. M. D. 1864 A, ii M, p. 21, pls. iii, vii, ix-xiv.
 Flower, W. H. 1869 B.
 Flower and Lydekker 1891 A, p. 591.
 Gervais, P. 1859 A, p. 247.
 Gray, J. E. 1865 A, p. 120.
 Mivart, St. G. 1885 B, p. 381.
 Zittel, K. A. 1893 B, p. 649.

Gulo luscus (Linn.).

- Linnaeus, C., 1758, Syst. Nat., ed. 10, i, p. 47 (Ursus.)
 Baird, S. F. 1857 A, p. 181.
 Cope, E. D. 1899 A, p. 229.
 Flower and Lydekker 1891 A, p. 591.
 Recent; northern parts of North America.
 Pleistocene; Pennsylvania.

LUTRINÆ.

- Albrecht, P. 1879 A. (Lutridæ.)
 Baird, S. F. 1857 A, p. 183.
 Coues, E. 1877 A, pp. 5, 293.
 Flower, W. H. 1883 D, p. 439.
 Flower and Lydekker 1891 A, p. 567.
 Gill, T. 1872 B, pp. 65, 66.
 Gray, J. E. 1865 A, p. 123. (Lutrina.)

- Lydekker, R. 1884 A, p. 187.
 Mivart, St. G. 1885 B, p. 394.
 Nicholson and Lydekker 1889 A, p. 1426.
 Roger, O. 1896 A, p. 62.
 Trouessart, E. L. 1897 A, p. 281.
 Winge, H. 1895 B, pp. 47, 70. (Lutrini.)
 Zittel, K. A. 1893 B, p. 652.

POMATOTHERIUM E. Geoffroy. Type *P. valetoni* E. Geoffroy.

- Geoffroy, E., 1833, Rev. Encyc., lix, p. 80.
 Cope, E. D. 1890 I, p. 951. (Brachypsalis, type *B. pachycephalus*.)
 1896 F, p. 385.
 1899 A, p. 230.
 Lydekker, R. 1885 B, p. 190. (Syn. of *Lutra*.)
 Meyer, H. 1847, p. 182. (Stephanodon.)
 Nicholson and Lydekker 1889 A, p. 1427.
 Pomel, A. 1847 C, p. 380. (Lutricitis, type *Lutra valetoni*.)
 1853 A, p. 46. (Lutricitis.)
 Schlosser, M. 1888 B, p. 112.

- Zittel, K. A. 1893 B, p. 652. (Pomatotherium, Brachypsalis.)

Pomatotherium pachycephalum Cope.

- Cope, E. D. 1890 I, p. 951. (Brachypsalis.)
 1896 F, p. 385. (Pomatotherium?.)
 Matthew, W. D. 1899 A, p. 68. (Brachypsalis pachygnathus.)
 Roger, O. 1896 A, p. 62. (Brachypsalis.)
 Trouessart, E. L. 1897 A, p. 281.
 Miocene (Loup Fork); Nebraska.

LUTRA Brisson. Type *Mustela lutra* Linn.

- Brisson, A. D., 1762, Regn. Anim., p. 201.
 Baird, S. F. 1857 A, p. 184.
 Barnston, G. 1863 A.
 Blainville, H. M. D. 1864 A, ii M, p. 26, pls. v, viii, ix-xiv.
 Burmeister, H. 1879 B, p. 165.
 Coues, E. 1877 A, p. 294.

- Flower, W. H. 1869 B.
 1883 D, p. 439.
 Flower and Lydekker 1891 A, p. 467.
 Gray, J. E. 1865 A, p. 125.
 1869 A, p. 103.
 Lydekker, R. 1884 A, p. 187.
 1885 B, p. 190.

¹ *Putorius erminius* has been reported by Leidy (1889 H, p. 5) from a cave in Pennsylvania, in which by far the greater number of animals belong to species now living in the vicinity.

- Martin, W. 1836 A.
 Mivart, St. G. 1885 B, p. 383.
 Nicholson and Lydekker 1889 A, p. 1427.
 Owen, R. 1846 B, p. 119.
 1866 B, p. 491.
 Schlosser, M. 1888 B, p. 112.
 Winge, H. 1895 B, pp. 69, 91.
 Zittel, K. A. 1893 B, p. 653.

Lutra canadensis Schreber.

- Allen, J. A. 1876 C, p. 333.
 Baird, S. F. 1857 A, p. 184, pl. xxxviii.
 Coues, E. 1877 A, p. 295, pl. xvii. (Synonymy and literature.)
 Trouessart, E. L. 1897 A, p. 285.
 Recent; North America. In caves of Pennsylvania, *vide* Allen.

Lutra piscinaria Leidy.

- Leidy, J.* 1873 B, p. 316, pl. xxxi, fig. 4; p. 230.
 Cope, E. D. 1878 H, p. 389. (Lutra, "near piscinaria.")
 1889 F.
 1889 S, p. 980.
 Coues, E. 1877 A, p. 323.
 Roger, O. 1896 A, p. 62.
 Trouessart, E. L. 1897 A, p. 285.
 Pliocene; Idaho.

Lutra rhoadsii Cope.

- Cope, E. D.* 1896 F, p. 391.
 1899 A, p. 238, pl. xviii, fig. 11.
 Trouessart, E. L. 1897 A, p. 285.
 Pleistocene; Pennsylvania.

LUTRICTIS Cope. Type *L. lycopotamicus* Cope.

- Cope, E. D.* 1879 B, p. 66.

Lutricitis lycopotamicus Cope.

- Cope, E. D.* 1879 B, p. 66.
 Matthew, W. D. 1899 A, p. 68.

- Roger, O. 1896 A, p. 63. (Lutra.)
 Trouessart, E. L. 1897 A, p. 285. (Lutra.)
 Zittel, K. A. 1893 B, p. 654. (Lutra.)
 Miocene (Loup Fork); Oregon.

MEGENCEPHALON Osb., Scott, and Speir. Type *M. primævus* Osb., Scott, and Speir.

- Osborn, Scott, and Speir* 1878 A, p. 20.
Cope, E. D. 1879 W, p. 33.
Scott, W. B. 1888 B.

Megencephalon primævus Osb., Scott, and Speir.

- Osborn, Scott, and Speir* 1878 A, p. 20, pl. ix, fig. 87.

- Bruce, A. T. 1883 A, p. 39, pl. vii, fig. 6.
Cope, E. D. 1883 II, p. 970.
 Roger, O. 1896 A, p. 63.
 Trouessart, E. L. 1897 A, p. 287. (Megencephalon.)
 Eocene; Wyoming.

Superfamily CYNODEA Flower.

- Flower, W. H.* 1869 B, p. 24.
Cope, E. D. 1882 D, p. 473. (Hypomycteri, in part.)
 1884 O, pp. 890, 892. (Hypomycteri, in part.)
Flower, W. H. 1883 D, p. 437.
Flower and Lydekker 1891 A, p. 544.
Gill, T. 1872 B, p. 63.

- Huxley, T. H. 1872 A, p. 358.
 Schlosser, M. 1888 B, p. 6.
 Tims, H. W. M. 1896 B, p. 462.
 Tomes, C. S. 1898 A, p. 464.
 Zittel, K. A. 1893 B, p. 618.

CANIDÆ.

- Baird, S. F. 1857 A, p. 102.
 Blainville, H. M. D. 1864 A, ii, P, pls. i-xiv.
Cope, E. D. 1875 L, p. 21.
 1879 F.
 1881 C.
 1881 F.
 1882 D, p. 473.
 1883 T.
 1884 O, pp. 263, 892.
 1888 D.
Cuvier, G. 1834 A, vii, p. 464.
 Filhol, H. 1883 A.
Flower, W. H. 1869 B, p. 24.
 1871 B.
 1883 D, p. 437.
Flower and Lydekker 1891 A, p. 544.
Gadow, H. 1898 A, p. 50.
Gill, T. 1872 B, pp. 57, 63.

- Gray, J. E. 1868 B.
 1869 A, p. 178.
 Haeckel, E. 1895 A, p. 585. (Canida.)
 Humphreys, J. 1889 A, p. 155.
 Huxley, T. H. 1872 A, p. 358.
 1880 A.
 Lydekker, R. 1884 A, p. 240.
 1885 B, p. 106.
 Mivart, St. G. 1881 A, pp. 479, 491.
 Nicholson and Lydekker 1889 A, p. 1435.
 Noack, T. 1894 A.
 Owen, R. 1845 B, p. 475.
 1866 B.
 1868 A, p. 330.
 Parsons, F. G. 1899 A.
 1900 A.
 Roger, O. 1896 A, p. 42.
 Schlosser, M. 1888 B, pp. 3, 14, 18.

Schmidt, O. 1886 A, p. 259.

Scott, W. B. 1890 C.

1891 A, p. 6.

1891 B, p. 373.

1891 C, p. 66.

1897 A.

1898 B.

Steinmann and Döderlein 1890 A, p. 719.

Tims, H. W. M. 1896 A.

1896 B, p. 445.

Tornier, G. 1888 A.

Trouessart, E. L. 1897 A, p. 288.

Turner, H. N. 1848 A.

Waterhouse, G. R. 1839 A.

Weyhe, — 1875 A, p. 116.

Wilckens, M. 1885 D.

Winge, H. 1895 B, pp. 47, 63. (Canini.)

Woodward, A. S. 1898 B, p. 389.

Wortman and Matthew 1899 A, p. 129.

Zittel, K. A. 1893 B, p. 619.

SIMOCYONINÆ.

Gill, T. 1872 B, pp. 59, 67. (Simocyonidæ.)

Roger, O. 1896 A, p. 50.

Trouessart, E. L. 1897 A, p. 291.

ENHYDROCYON Cope. Type *E. stenocephalus* Cope.

Cope, E. D. 1879 B, p. 56.

1879 F, pp. 179, 185.

1879 H, p. 131.

1881 C, p. 178.

1883 T, p. 245.

1884 O, pp. 893, 935.

Flower and Lydekker 1891 A, p. 562.

Nicholson and Lydekker 1889 A, p. 1433.

Schlosser, M. 1888 B, p. 61.

Scott, W. B. 1898 B, p. 414.

Wortman and Matthew 1899 A, p. 130.

Zittel, K. A. 1893 B, p. 633.

Enhydrocyon stenocephalus Cope.

Cope, E. D. 1879 B, p. 56.

1883 T, p. 245, fig. 12.

1884 O, p. 935, pl. lxix, figs. 3-5.

Matthew, W. D. 1899 A, p. 63.

Roger, O. 1896 A, p. 51.

Trouessart, E. L. 1897 A, p. 291.

Miocene (John Day); Oregon.

HYÆNOCYON Cope. Type *H. basilatus* Cope.

Cope, E. D. 1879 E, p. 372.

1881 C, pp. 179, 181.

1881 P.

1883 T, p. 245.

1884 O, pp. 893, 942.

Flower and Lydekker 1891 A, p. 562.

Nicholson and Lydekker 1889 A, p. 1433.

Schlosser, M. 1888 B, p. 61.

1890 B, p. 26.

Wortman and Matthew 1899 A, p. 130.

Zittel, K. A. 1893 B, p. 633.

Hyænocyon basilatus Cope.

Cope, E. D. 1879 B, p. 57, part. (Enhydrocyon.)

1879 E, p. 372, in part.

1881 C, p. 181, in part.

1883 T, p. 246, fig. 3c.

1884 O, p. 942, pl. lxxv, fig. 3.

Matthew, W. D. 1899 A, p. 63.

Roger, O. 1896 A, p. 50.

Schlosser, M. 1890 B, p. 25.

Trouessart, E. L. 1897 A, p. 292.

Miocene (John Day); Oregon.

Hyænocyon sectorius Cope.

Cope, E. D. 1883 T, p. 246, fig. 13d.

1879 B, p. 57, in part. (Enhydrocyon basilatus.)

1879 E, p. 372, in part. (E. basilatus.)

1881 C, p. 181, in part. (E. basilatus.)

1884 O, p. 943, pl. lxx, fig. 1.

Matthew, W. D. 1899 A, p. 63.

Roger, O. 1896 A, p. 51.

Schlosser, M. 1890 B, p. 25.

Trouessart, E. L. 1897 A, p. 292.

Miocene (John Day); Oregon.

OLIGOBUNIS Cope. Type *Ictocyon crassivultus* Cope.

Cope, E. D. 1881 P, p. 497.

1883 T, p. 246.

1884 O, pp. 893, 939.

Nicholson and Lydekker 1889 A, p. 1433.

Schlosser, M. 1888 B, pp. 18, 60, 105.

Scott, W. B. 1898 B, p. 401.

Wortman and Matthew 1899 A, p. 131.

Zittel, K. A. 1893 B, p. 633.

Oligobunis crassivultus Cope.

Cope, E. D. 1879 F, p. 190. (Icticyon.)

Cope, E. D. 1881 C, p. 181. (Icticyon.)

1881 P, p. 497.

1883 T, p. 246, fig. 14.

1884 O, p. 940, pl. lxix, figs. 1, 2, text fig. 34.

Matthew, W. D. 1899 A, p. 63.

Roger, O. 1896 A, p. 51.

Schlosser, M. 1888 B, p. 105.

Trouessart, E. L. 1897 A, p. 292.

Zittel, K. A. 1893 B, p. 633, fig. 530.

Miocene (John Day); Oregon.

CANINÆ.

Cope, E. D. 1879 F.

Gill, T. 1872 B, p. 63.

Lydekker, R. 1884 A, p. 240.

Roger, O. 1896 A, p. 42.

Scott, W. B. 1890 C.

Trouessart, E. L. 1897 A, p. 293.

Zittel, K. A. 1893 B, p. 622.

CYNODICTIS Bravard and Pomel. Type *C. parisiensis* Pomel.

- Bravard and Pomel, 1850, Notice Oss. foss. Débruge, p. 5.
 Filhol, H. 1876 A, p. 66.
 1883 A.
 Flower and Lydekker 1891 A, p. 555.
 Gervais, P. 1859 A, p. 216.
 Huxley, T. H. 1880 A.
 Lydekker, R. 1884 A, p. 243.
 1885 B, p. 107.
 Nicholson and Lydekker 1889 A, p. 1437.
 Pomel, A. 1853 A, p. 66.
 Roger, O. 1896 A, p. 42.
 Schlosser, M. 1888 B, pp. 16, 23, 40.
 1890 B, p. 45.
 Scott, W. B. 1888 A.
 1889 A, p. 21.
 1889 B, p. 211.
 1890 C, p. 38. (*Hesperocyon*.)
 1895 C, p. 72.
 1898 B, p. 364.
 1899 B, p. 137.
 Scott and Osborn 1887 B, p. 152.
 Trouessart, E. L. 1897 A, p. 293.
 Wilckens, M. 1885 D, p. 497.
 Wortman and Matthew 1899 A, pp. 118, 130.
 Woodward, A. S. 1898 B, p. 390.
 Zittel, K. A. 1893 B, p. 622.

Cynodictis gregarius (Cope).

- Cope, E. D. 1873 T, p. 3. (*Canis*.)
 Bruce, A. T. 1883 A, p. 41, fig. 7. (*Galecynus*.)
 Cope, E. D. 1873 CC, p. 9. (*Canis*.)
 1874 B, p. 506. (*Canis*.)
 1879 B, p. 58. (*Canis*.)
 1879 D, p. 63. (*Canis*.)
 1881 C, p. 181. (*Galecynus*.)
 1883 F, p. 217. (*Galecynus*.)
 1883 T, p. 241. (*Galecynus*.)
 1884 O, pp. 915, 916, pl. lxviii, figs. 7-11; pl. lxviii, figs. 5-8. (*Galecynus*.)
 Matthew, W. D. 1899 A, p. 54.
 Roger, O. 1896 A, p. 45. (*Galecynus*.)

- Scott, W. B. 1898 B, p. 367, pl. xix, figs. 11-13; pl. xx, figs. 23-24.
 Trouessart, E. L. 1897 A, p. 298. (*Galecynus*.)
 Wortman and Matthew 1899 A, pp. 123, 130.
 Oligocene (White River); Colorado, Nebraska, South Dakota: (John Day); Oregon, *vide* Cope.

Cynodictis hylactor Hay.

- Hay, O. P. 1899 C, p. 254.
 Cope, E. D. 1884 O, p. 916. (Syn. of *Galecynus gregarius*.)
 Hayden, F. V. 1858 B, p. 158. (*Amphicyon gracilis*.)
 Leidy, J. 1856 A, p. 90. (*Amphicyon gracilis*, not of Pomel.)
 1869 A, pp. 36, 369, pl. i, fig. 7; pl. v, figs. 6-9. (*Amphicyon gracilis*.)
 1871 C, p. 342. (*Amphicyon gracilis*.)
 Matthew, W. D. 1899 A, p. 54. (Syn. of *C. lippincottianus*.)
 Roger, O. 1896 A, p. 44. (*Daphænos gracilis*.)
 Schlosser, M. 1888 B, p. 85. (*Amphicyon gracilis*.)
 Scott and Osborn 1887 B, p. 152. (*C. gracilis*.)
 Trouessart, E. L. 1897 A, p. 296. (*Daphænos gracilis*.)
 Oligocene (White River); South Dakota.

Cynodictis lippincottianus (Cope).

- Cope, E. D. 1873 CC, p. 9. (*Canis*.)
 1874 B, p. 506. (*Canis*.)
 1879 B, p. 58. (*Canis*.)
 1879 D, p. 63. (*Canis*.)
 1884 O, p. 919, pl. lxvii, figs. 5, 6. (*Galecynus*.)
 Matthew, W. D. 1899 A, p. 54.
 Roger, O. 1896 A, p. 45. (*Galecynus*.)
 Scott, W. B. 1898 B, p. 400.
 Wortman and Matthew 1899 A, pp. 123, 128, 130.
 Oligocene (White River); Colorado, Oregon.

Cynodictis temnodon Wort. and Matth.

- Wortman and Matthew 1899 A, p. 130.
 Oligocene (White River); South Dakota.

NOTHO CYON¹ Matth.

- Matthew, W. D. 1899 A, p. 62. (April 8.)
 Wortman and Matthew 1899 A, pp. 124, 130, pl. vi. (June 21.)

Nothocyon geismarianus (Cope).

- Cope, E. D. 1879 D, p. 71. (*Canis*.)
 1879 B, p. 58. (*Canis*.)
 1881 C, p. 181. (*Galecynus*.)
 1883 T, p. 240, figs. 5, 6. (*Galecynus*.)
 1884 O, pp. 915, 920, pl. lxx, figs. 2, 3; pl. lxxa. (*Galecynus*.)
 1889 C, p. 233, fig. 59. (*Cynodictis*.)
 Matthew, W. D. 1899 A, p. 62.
 Roger, O. 1896 A, p. 45. (*Galecynus*.)
 Scott, W. B. 1898 B, p. 365. (*Canis*.)
 Trouessart, E. L. 1897 A, p. 299. (*Galecynus*.)

- Woodward, A. S. 1898 B, p. 391.
 Wortman and Matthew 1899 A, pp. 127, 130.
 Zittel, K. A. 1893 B, p. 626, fig. 524. (*Galecynus*.)
 Miocene (John Day); Oregon.

Nothocyon latidens (Cope).

- Cope, E. D. 1881 C, p. 181. (*Galecynus*.)
 1883 T, p. 241. (*Galecynus*.)
 1884 O, pp. 915, 930, pl. lxx, figs. 4, 5. (*Galecynus*.)
 Matthew, W. D. 1899 A, p. 62.
 Roger, O. 1896 A, p. 45. (*Galecynus*.)
 Scott, W. B. 1898 B, p. 365. (*Canis*.)
 Trouessart, E. L. 1897 A, p. 299. (*Galecynus*.)
 Wortman and Matthew 1899 A, pp. 127, 130.
 Miocene (John Day); Oregon.

¹Originally the three species here included were assigned to this genus by Matthew. No type was designated, but *Canis geismarianus* may be taken. Later, Wortman and Matthew include in the genus also *Canis parvidens* Mivart.

Nothocyon lemur (Cope).

- Cope, E. D. 1879 E, p. 371. (Canis.)
 1881 C, p. 181. (Galecyneus.)
 1883 T, p. 241, fig. 7. (Galecyneus.)
 1884 O, pp. 915, 931, pl. lxx, figs. 6-8. (Galecyneus.)

DAPHÆNUS Leidy. Type *D. vetus* Leidy.

Leidy, J. 1853 D, p. 393.

This word is usually spelled *Daphænus*. The original form is given.

- Cope, E. D. 1884 O, p. 894. (Syn. of Amphicyon.)
 Eyerman, J. 1896 A, p. 279.
 Flower and Lydekker 1891 A, p. 555. (Daphænus.)
 Nicholson and Lydekker 1889 A, p. 1435.
 Roger, O. 1896 A, p. 44. (Daphænos.)
 Scott, W. B. 1889 B, p. 211.
 1890 C, p. 37.
 1891 A, p. 6.
 1897 A, p. 1.
 1898 B, p. 326.

- Trouessart, E. L. 1897 A, p. 296. (Daphænos.)
 Winge, H. 1895 A, pp. 46, 52, 91, 92.
 Wortman and Matthew 1899 A, pp. 115, 118, 129. (Daphænus.)
 Zittel, K. A. 1893 B, p. 625. (Daphænos.)

Daphænus angustidens (Marsh).

- Marsh, O. C. 1871 E, p. 124. (Amphicyon.)
 King, C. 1878 A, p. 411. (Amphicyon.)
 Lydekker, R. 1884 A, p. 247. (Amphicyon.)
 Matthew, W. D. 1899 A, p. 54. (Syn. of *Cynodictis lippincottianus*.)
 Roger, O. 1896 A, p. 44.
 Schlosser, M. 1890 B, pp. 62, 64. (Amphicyon.)
 Trouessart, E. L. 1897 A, p. 296. (Daphænos.)
 Oligocene (White River); Nebraska.

Daphænus dodgei Scott.

- Scott, W. B. 1898 B, p. 362, pl. xix, figs. 6, 7. (Daphænus.)
 Wortman and Matthew 1899 A, p. 129. (Daphænus.)
 Oligocene (White River); Nebraska.

Daphænus felinus Scott.

- Scott, W. B. 1898 B, p. 361, pl. xx, figs. 15-17. (Daphænus.)
 Wortman and Matthew 1899 A, p. 129. (Daphænus.)
 Oligocene (White River); Nebraska.

Daphænus hartshornianus (Cope).

- Cope, E. D. 1873 CC, p. 9. (Canis.)

PARADAPHÆNUS Matth. Type *Canis cuspidatus* Cope.

- Matthew, W. D. 1899 A, p. 62. (April 8.)
 Wortman and Matthew 1899 A, p. 129. (June 21.)

Paradaphænus cuspidatus (Cope).

- Cope, E. D. 1879 D, p. 70. (Canis.)
 1879 B, p. 58. (Canis.)
 1879 E, p. 372. (Amphicyon entoptychi.)
 1881 C, p. 178. (Amphicyon.)
 1883 T, p. 237, fig. 1. (Amphicyon.)
 1884 O, p. 898, pl. lxxviii, figs. 1-4. (Amphicyon.)
 Lydekker, R. 1884 A, p. 247. (Amphicyon cuspidatus, A. entoptychi.)

- Matthew, W. D. 1899 A, p. 62.
 Roger, O. 1896 A, p. 45. (Galecyneus.)
 Scott, W. B. 1898 B, p. 365. (Canis.)
 Trouessart, E. L. 1897 A, p. 299. (Galecyneus.)
 Wortman and Matthew 1899 A, pp. 127, 130.
 Miocene (John Day); Oregon.

Cope, E. D. 1874 B, p. 505. (Canis.)

- 1881 C, p. 178. (Canis.)
 1883 T, p. 237, figs. 2a, 3. (Amphicyon.)
 1884 O, pp. 896, 906. (Amphicyon.)

Leidy, J. 1869 A, p. 32, in part; pl. i, figs. 3, 4, 6. (Amphicyon vetus=A. hartshornianus, *vide* Cope.)

- Lydekker, R. 1884 A, p. 247. (Amphicyon.)
 Matthew, W. D. 1899 A, pp. 52, 62. (Daphænus.)
 Roger, O. 1896 A, p. 44.
 Schlosser, M. 1888 B, p. 85. (Amphicyon.)
 Scott, W. B. 1890 C, p. 37. (Daphænus.)
 1898 B, p. 361, pl. xix, figs. 1-5; pl. xx, figs. 19-21a; p. 363, text fig. A, 2. (Daphænus.)
 Trouessart, E. L. 1897 A, p. 926. (Daphænos.)
 Wortman and Matthew 1899 A, p. 129. (Daphænus.)
 Oligocene (White River); Colorado, South Dakota.

Daphænus robustus Scott.

- Scott, W. B. 1897 A, p. 2. (Daphænus.)
 Oligocene (White River); Colorado.

Daphænus vetus Leidy.

- Leidy, J. 1853 D, p. 393.
 Cope, E. D. 1881 C, p. 178. (Amphicyon.)
 1883 T, p. 237. (Amphicyon.)
 1884 O, p. 894. (Amphicyon.)
 Hayden, F. V. 1858 B, p. 158. (Amphicyon.)
 King, C. 1878 A, p. 411. (Amphicyon.)
 Leidy, J. 1854 E, p. 157. (Amphicyon.)
 1869 A, pp. 32, 369, pl. i, figs. 1-6. (Amphicyon; see *D. hartshornianus*.)
 1871 C, p. 342. (Amphicyon.)
 Lydekker, R. 1884 A, p. 248. (Amphicyon.)
 Matthew, W. D. 1899 A, p. 53. (Daphænus.)
 Roger, O. 1896 A, p. 44. (Daphænos.)
 Schlosser, M. 1888 B, p. 85. (Amphicyon.)
 Scott, W. B. 1890 C, p. 37. (Daphænus.)
 1897 A, p. 1. (Daphænus.)
 1898 B, pl. xix, figs. 8-10. (Daphænus.)
 Trouessart, E. L. 1897 A, p. 296. (Daphænos.)
 Wortman and Matthew, 1899 A, p. 129.
 Oligocene (White River); South Dakota, Colorado.

Paradaphænus transversus Wort. and Matth.

- Wortman and Matthew 1899 A, p. 129.
 Miocene (John Day); Oregon.

TEMNOCYON Cope. Type *T. altigenis* Cope.

- Cope, E. D. 1879 D, p. 68.
 1879 F, pp. 178, 180.
 1881 C, pp. 178, 179.
 1883 T, p. 237.
 1884 O, pp. 893, 902.
 Eyerman, J. 1896 A, p. 267.
 Flower and Lydekker 1891 A, p. 555.
 Nicholson and Lydekker 1889 A, p. 1436.
 Schlosser, M. 1888 B, pp. 18, 23, 24, 56.
 Scott, W. B. 1890 C, p. 38.
 1897 A, p. 3.
 1898 B.
 Wortman and Matthew 1899 A, pp. 115, 130.
 Zittel, K. A. 1893 B, p. 626.

Temnocyon altigenis Cope.

- Cope, E. D. 1879 D, p. 68.
 1879 B, p. 58.
 1881 C, p. 179.
 1883 T, p. 238, figs. 2, 3.
 1884 O, p. 903, pl. lxviii, fig. 9; pl. lxx, fig. 11.
 Matthew, W. D. 1899 A, p. 62.
 Roger, O. 1896 A, p. 44.

MESOCYON Scott. Type *Temnocyon coryphæus* Cope.

- Scott, W. B. 1890 C, p. 38.
 Eyerman, J. 1894 A. (Hypotemnodon, type *Temnocyon coryphæus*).
 1896 A, p. 284. (Hypotemnodon.)
 Hay, O. P. 1899 C, p. 254.
 Scott, W. B. 1897 A, p. 3. (Hypotemnodon.)
 1898 B. (Hypotemnodon.)
 Matthew, W. D. 1899 A, p. 63. (Hypotemnodon.)
 Trouessart, E. L. 1897 A, p. 297. (Hypotemnodon.)
 Wortman and Matthew 1899 A, pp. 118, 130. (Hypotemnodon.)

Mesocyon coryphæus (Cope).

- Cope, E. D. 1879 F, p. 180. (Temnocyon.)
 1879 B, p. 58. (Canis hartshornianus.)
 1881 C, p. 179. (Temnocyon.)
 1883 T, p. 239, fig. 4. (Temnocyon.)
 1884 O, pp. 903, 906, pl. lxxi; pl. lxxia, figs. 1-7; pl. lxxia, figs. 4-7. (Temnocyon.)
 Eyerman, J. 1894 A. (Hypotemnodon.)

CYNODESMUS Scott. Type *C. thooides* Scott.

- Scott, W. B. 1893 B, p. 660.
 1895 C, p. 63.
 1897 A, p. 3.
 Wortman and Matthew 1899 A, p. 118.
Cynodesmus thooides Scott.
 Scott, W. B. 1893 B, p. 660.

ÆLURODON Leidy. Type *A. ferox* Leidy = *A. sævus* Leidy.

- Leidy, J. 1858 E, p. 22.
 Cope, E. D. 1875 N, p. 256.
 1881 F, p. 387.
 1883 T, p. 243.
 1884 O, p. 893.

- Trouessart, E. L. 1897 A, p. 296.
 Wortman and Matthew 1899 A, p. 130.
 Zittel, K. A. 1893 B, p. 625, fig. 523, C, D.
 Miocene (John Day); Oregon.

Temnocyon ferox Eyerman.

- Eyerman, J. 1894 A.
 1896 A.
 Matthew, W. D. 1899 A, p. 62.
 Trouessart, E. L. 1897 A, p. 297.
 Wortman and Matthew 1899 A, p. 117, fig. 3, p. 130.
 Miocene (John Day); Oregon.

Temnocyon wallowianus Cope.

- Cope, E. D. 1881 C, p. 179.
 1883 T, p. 239.
 1884 O, pp. 903, 905, pl. lxx, fig. 10.
 Matthew, W. D. 1899 A, p. 62.
 Roger, O. 1896 A, p. 44.
 Trouessart, E. L. 1897 A, p. 296.
 Wortman and Matthew 1899 A, p. 130.
 Zittel, K. A. 1893 B, p. 625, fig. 523 B.
 Miocene (John Day); Oregon.

- Eyerman, J. 1896 A, p. 284. (Hypotemnodon.)
 Hay, O. P. 1899 C, p. 253.
 Matthew, W. D. 1899 A, p. 63. (Hypotemnodon.)
 Scott, W. B. 1890 C, p. 39. (Mesocyon.)
 Trouessart, E. L. 1897 A, p. 297. (Hypotemnodon.)
 Wortman and Matthew 1899 A, p. 130. (Hypotemnodon.)
 Zittel, K. A. 1893 B, p. 625, fig. 523 A.
 Miocene (John Day) Oregon.

Mesocyon josephi (Cope).

- Cope, E. D. 1881 C, p. 179. (Temnocyon.)
 1883 T, p. 239. (Temnocyon.)
 1884 O, pp. 903, 912, pl. lxx, fig. 9. (Temnocyon.)
 Matthew, W. D. 1899 A, p. 63.
 Roger, O. 1896 A, p. 44.
 Trouessart, E. L. 1897 A, p. 297. (Temnocyon.)
 Miocene (John Day); Oregon.

- Matthew, W. D. 1899 A, p. 54.
 Roger, O. 1896 A, p. 44.
 Scott, W. B. 1895 C, p. 63, pl. i, figs. 1-5.
 Trouessart, E. L. 1897 A, p. 297.
 Oligocene (White River); Montana?

- Flower and Lydekker 1891 A, p. 562.
 Leidy, J. 1858 E, p. 21. (Subgenus *Epicyon*, type *Canis haydeni*.)
 1869 A, p. 68.
 1871 C, p. 344.

Nicholson and Lydekker 1889 A, p. 1433.

Schlosser, M. 1888 B, pp. 24, 61.

1890 B, p. 25. (*Prohyaena*, type *Canis wheel-
erianus* Cope.)

Scott, W. B. 1888 A.

1891 D, p. 90.

1892 A, p. 425.

1898 B, p. 402.

Scott and Osborn 1890 B, p. 66.

Trouessart, E. L. 1897 A, p. 297.

Zittel, K. A. 1893 B, p. 626.

***Ælurodon compressus* Cope.**

Cope, E. D. 1890 J, p. 1067.

Matthew, W. D. 1899 A, p. 67.

Roger, O. 1896 A, p. 45.

Scott and Osborn 1890 B, p. 67, fig. 2 A. (*Æ.
hyænoides*, not of Cope.)

Trouessart, E. L. 1897 A, p. 297.

Miocene (Loup Fork); Nebraska.

***Ælurodon haydeni* (Leidy).**

Leidy, J. 1858 E, p. 21. [*Canis* (*Epicyon*).]

Cope, E. D. 1874 P, p. 11. (*Canis*.)

1875 N, p. 256. (*Amphicyon*.)

1883 T, p. 242. (*Canis*.)

Hayden, F. V. 1858 B, p. 158. [*Canis* (*Epicyon*).]

Leidy, J. 1869 A, pp. 30, 368, pl. i, fig. 10. [*Canis*
(*Epicyon*).]

1871 C, p. 341. (*Canis*.)

Matthew, W. D. 1899 A, p. 67.

Roger, O. 1896 A, p. 45.

Scott and Osborn 1890 B, p. 66, fig. 2 B.

Trouessart, E. L. 1897 A, p. 297.

Miocene (Loup Fork); Nebraska.

***Ælurodon hyænoides* Cope.**

Cope, E. D. 1881 F, p. 388.

1881 BB, p. 1023.

1883 T, p. 244, fig. 11.

1884 O, p. 945, fig. 35c.

Matthew, W. D. 1899 A, p. 67.

Roger, O. 1896 A, p. 45.

Schlosser, M. 1890 B, p. 25.

Trouessart, E. L. 1897 A, p. 298.

Miocene (Loup Fork); Kansas or Nebraska.

***Ælurodon meandrinus* Hatcher.**

Hatcher, J. B. 1894 C, p. 239.

Matthew W. D. 1899 A, p. 67.

Roger, O. 1896 A, p. 45.

Trouessart, E. L. 1897 A, p. 298.

Miocene (Loup Fork); Nebraska.

***Ælurodon sævus* (Leidy).**

Leidy, J. 1858 E, p. 21. (*Canis*.)

Cope, E. D. 1874 B, p. 519. (*Canis*.)

1874 P, p. 11. (*Canis*.)

1875 F, p. 68. (*Canis*.)

Cope, E. D. 1877 K, p. 302. (*Canis lupus*.)

1881 F, p. 387.

1883 T, p. 243, fig. 9.

1884 O, p. 945, text fig. 36.

1888 W, p. 1020.

1889 C, p. 234, fig. 60.

1890 J, p. 1067, pl. xxxii.

1898 B, p. 100, fig. 37.

Hayden, F. V. 1858 B, p. 158. (*Ælurodon ferox*,
Canis sævus.)

King, C. 1878 A, p. 430. (*Canis*.)

Leidy, J. 1858 E, p. 21 (*Canis sævus*); p. 27
(*Ælurodon ferox*).

1869 A, pp. 28, 368, pl. i, fig. 9 (*Canis sævus*);
pp. 68, 367, pl. i, figs. 13, 14 (*Ælurodon
ferox*).

1870 V, p. 65. (*Ælurodon ferox?*.)

1871 C, p. 341 (*Canis sævus*); p. 344 (*Æluro-
don ferox*).

Matthew, W. D. 1899 A, p. 67.

Roger, O. 1896 A, p. 45.

Schlosser, M. 1888 B, pp. 24, 61. (*Canis*.)

Scott and Osborn 1890 B, p. 66, figs. 1, 2.

Trouessart, E. L. 1897 A, p. 297.

Miocene (Loup Fork); Nebraska, New Mexico.

***Ælurodon taxoides* Hatcher.**

Hatcher, J. B. 1894 C, p. 236, pl. i, fig. 2.

Matthew, W. D. 1899 A, p. 67.

Roger, O. 1896 A, p. 45.

Trouessart, E. L. 1897 A, p. 298.

Miocene (Loup Fork); Nebraska.

***Ælurodon ursinus* (Cope).**

Cope, E. D. 1875 N, p. 256. (*Canis*.)

1875 F, p. 68. (*Canis*.)

1877 K, p. 304, pl. lxxix, fig. 1. (*Canis*.)

1879 A, p. 46. (*Amphicyon?*.)

1881 C, p. 178. (*Canis*.)

1883 T, p. 242. (*Canis*.)

1884 O, p. 39. (*Amphicyon*.)

Matthew, W. D. 1899 A, p. 67.

Roger, O. 1896 A, p. 45.

Scott and Osborn 1890 B, p. 68.

Trouessart, E. L. 1897 A, p. 298.

Miocene (Loup Fork); New Mexico, Nebraska.

***Ælurodon wheelerianus* Cope.**

Cope, E. D. 1877 K, p. 302, pl. lxxix, fig. 2. (*Canis*.)

1881 F, p. 388.

1883 T, p. 244, fig. 11.

Matthew, W. D. 1899 A, p. 67.

Roger, O. 1896 A, p. 45.

Schlosser, M. 1890 B, p. 25. (*Prohyaena*.)

Scott and Osborn 1890 B, p. 67.

Trouessart, E. L. 1897 A, p. 297.

Zittel, K. A. 1893 B, p. 626.

Miocene (Loup Fork); New Mexico, Nebraska.

CANIMARTES Cope. Type *C. cummingsii* Cope.

Cope E. D. 1892 Y, p. 1029.

1892 I, p. 327.

1893 A, p. 51.

***Canimartes cummingsii* Cope.**

Cope, E. D. 1892 Y, p. 1029.

Cope, E. D. 1892 I, p. 327.

1893 A, p. 52, pl. xiv, figs. 12-14.

Matthew, W. D. 1899 A, p. 75.

Roger, O. 1896 A, p. 59.

Trouessart, E. L. 1897 A, p. 298.

Pliocene (Blanco); Texas.

TOMARCTUS Cope. Type *T. brevirostris* Cope.

Cope, E. D. 1873 T, p. 2.

1874 B, p. 519.

1879 F, pp. 179, 185.

1883 T, p. 243.

Nicholson and Lydekker 1889 A, p. 1433.

Tomarctus brevirostris Cope.

Cope, E. D. 1873 T, p. 2.

Cope, E. D. 1873 CC, p. 9.

1874 B, p. 520.

1874 P, p. 11.

1883 T, p. 243.

Matthew, W. D. 1899 A, p. 68.

Roger O. 1896 A, p. 55.

Miocene (Loup Fork); Colorado.

CANIS Linn. Type *C. familiaris* Linn.

Linnæus, C., 1758, Syst. Nat., ed. 10, i, p. 38.

Baird, S. F. 1857 A, p. 104.

Blainville, H. M. D. 1864 A, ii, P, plates.

Cope, E. D. 1877 K, p. 300.

1879 F, pp. 178, 184.

1881 C, p. 178.

1884 O, p. 893.

Cuvier, G. 1834 A, vii, p. 465.

Filhol, H. 1883 A.

Flower, W. H. 1869 B, p. 24.

1871 B.

1876 B, xiii, p. 487.

1883 D, p. 438.

1885 A.

Flower and Lydekker 1891 A, p. 546.

Gray, J. E. 1868 B, p. 508.

1869 A, p. 193.

Huxley, T. H. 1872 A, p. 353.

1880 A.

Leche, W. 1895 A, p. 60.

Lydekker, R. 1884 A, p. 252.

1885 B, p. 123.

Maggi, L. 1898 D.

1898 E, figs. 1-20.

Nicholson and Lydekker 1889 A, p. 1435.

Owen, R. 1868 A, p. 331, fig. 262.

Paulli, S. 1900 B, p. 489.

Pictet, F. J. 1853 A, p. 202.

Schlosser, M. 1888 B, p. 20.

Shufeldt, R. W. 1900 A, p. 395. (*Vulpes*.)

Steinmann, and Döderlein 1890 A, p. 720.

Trouessart, E. L. 1897 A, p. 299.

Wilckens, M. 1885 A, p. 518.

Winge, H. 1895 B, pp. 60, 91, 102, 103.

Wortman, J. L. 1886 A, p. 397.

Zittel, K. A. 1893 B, p. 627.

Canis? anceps Scott.

Scott, W. B. 1893 B, p. 660.

Matthew, W. D. 1899 A, p. 67.

Roger, O. 1896 A, p. 46.

Scott, W. B. 1895 C, p. 75.

Trouessart, E. L. 1897 A, p. 302.

Miocene (Loup Fork); Montana.

Canis brachypus Cope.

Cope, E. D. 1881 F, p. 389.

1883 T, p. 242, fig. 8.

1888 W.

Matthew, W. D. 1899 A, p. 67.

Roger, O. 1896 A, p. 48.

Miocene (Loup Fork); Wyoming.

Canis cinereoargenteus Schreber.Allen, J. A. 1876 C, p. 333. (*Vulpes virginianus*.)

Baird, S. F. 1857 A, p. 139, pl. xxxv, fig. 1.

Cope, E. D. 1895 F, p. 447. (*Vulpes*.)Leidy, J. 1869 A, p. 368. (*C. virginianus*.)1889 H, p. 5. (*C. virginianus*.)

Redfield, W. C. 1850 A, p. 255. ("Vulpes"; may be not this species.)

Trouessart, E. L. 1897 A, p. 313. (*Urocyon*.)

Pleistocene; lead region of Illinois, New York?, Pennsylvania.

Canis dirus Allen.

Allen, J. A. 1876 A, p. 48.

Cope, E. D. 1877 K, p. 301.

Roger, O. 1896 A, p. 48.

Trouessart, E. L. 1897 A, p. 302.

Pleistocene; lead region of Upper Mississippi River.

Canis indianensis Leidy.

Leidy, J. 1869 A, p. 368.

Allen, J. A. 1876 A, p. 48 (*C. indianensis*, *C. primaevus*); p. 49 (*C. mississippiensis*).

Cope, E. D. 1894 A, p. 453, pl. xxi, figs. 14-16.

1899 A, p. 227.

Cope and Wortman 1884 A, p. 9. (*C. lupus*.)Leidy, J. 1854 I, p. 200. (*C. primaevus*; name preoccupied.)1856 T, p. 167, pl. xvii, figs. 11, 12. (*C. primaevus*.)

1873 B, pp. 230, 315, pl. xxxi, fig. 2.

1873 F, p. 260.

Roger, O. 1896 A, p. 48. (*C. indianensis*, *C. mississippiensis*.)Trouessart, E. L. 1897 A, p. 302. (*C. indianensis*, *C. mississippiensis*.)

Whitney, J. D. 1879 A, p. 246.

Yates, L. G. 1874 B, p. 18.

Pleistocene; Indiana, lead region of Upper Mississippi River; California (Leidy).

Canis latidentatus (Cope).Cope, E. D. 1899 A, p. 228, pl. xviii, figs. 4, 4a. (*Vulpes*.)**Canis latrans** Say.

Say, T., 1823, Long's Exped. R. Mts., i, p. 168.

Baird, S. F. 1857 A, p. 113, pl. lxxvi.

Cope, E. D. 1878 H, p. 389.

1883 T, p. 242.

1889 F, p. 161.

1889 S, p. 980.

Cope and Wortman 1884 A, p. 7.

Dana, J. D. 1879 A, p. 233.

Haeckel, E. 1895 A, p. 586.

Leidy, J. 1869 A, p. 369.

Trouessart, E. L. 1897 A, p. 304.

Whitney, J. D. 1879 A, p. 246.

Wyman, J. 1862 A, p. 422.

Recent; northern part of Mississippi Valley to Alberta. Pleistocene; Illinois, Indiana, Oregon.

Canis? marshii Hay.

Hay, O. P. 1899 C, p. 253.

Leidy, J. 1872 B, p. 356. (C. montanus.)

Lydekker, R. 1884 A, p. 253. (C. montanus.)

Marsh, O. C. 1871 E, p. 123. (C. montanus, not of Pearson.)

Matthew, W. D. 1899 A, pp. 40, 67. (C. montanus.)

Roger, O. 1896 A, p. 46. (C. montanus.)

Schlosser, M. 1890 B, pp. 62, 64. (C. montanus.)

Trouessart, E. L. 1897 A, p. 302. (C. montanus?.)

Eocene (Bridger); Wyoming.

The generic position of this species is uncertain, but the specific title *montanus* is not available.

Canis occidentalis Richardson.

Richardson, J., 1829, Fauna Bor.-Amer., p. 60.

Baird, S. F. 1857 A, p. 104, pl. xxxi.

Cope, E. D. 1883 T, p. 242. (C. lupus.)

Leidy, J. 1869 A, p. 368.

1889 H, p. 5. (C. lupus.)

Lydekker, R. 1884 A, p. 264. (C. lupus?.)

Trouessart, E. L. 1897 A, p. 302.

Williston, S. W. 1898 I, p. 92. (C. lupus.)

Wyman, J. 1862 A, p. 422.

Recent; North America. Pleistocene; lead region of Upper Mississippi River.

Canis priscolatrans Cope.

Cope, E. D. 1899 A, p. 227 pl. xviii, figs. 3-3g.

Pleistocene; Pennsylvania.

Canis temerarius Leidy.

Leidy, J. 1858 E, p. 21.

Cope, E. D. 1883 T, p. 242.

1884 O, p. 915.

Hayden, F. V. 1858 B, p. 158.

King, C. 1878 A, p. 430.

Leidy, J. 1869 A, pp. 29, 368, pl i, fig. 12.

1871 C, p. 341.

Matthew, W. D. 1899 A, p. 67.

Roger, O. 1896 A, p. 48.

Trouessart, E. L. 1897 A, p. 302.

Miocene (Loup Fork); Nebraska, Colorado.

Canis vafer Leidy.

Leidy, J. 1858 E, p. 21.

Cope, E. D. 1875 F, p. 68.

1877 K, pp. 301, 302.

1884 O, p. 915.

Hayden, F. V. 1858 B, p. 158.

Leidy, J. 1869 A, pp. 29, 368, pl. i, fig. 11.

1871 C, p. 341.

1873 B, p. 315.

Matthew, W. D. 1899 A, p. 67.

Roger, O. 1896 A, p. 48.

Schlosser, M. 1888 B, p. 28.

Scott and Osborn 1890 B, p. 69, fig. 3. (C. vafer?.)

Trouessart, E. L. 1897 A, p. 310. (Vulpes.)

Miocene (Loup Fork); Nebraska.

PACHYCYON Allen. Type *P. robustus* Allen.

Allen, J. A. 1885 A, p. 1.

Pachycyon robustus Allen.

Allen, J. A. 1885 A, p. 1, pls. i-iii.

Cope, E. D. 1886 G.

Trouessart, E. L. 1897 A, p. 302. (Canis.)

Pleistocene; Virginia.

HYÆNIDÆ.

Blainville, H. M. D. 1864 A, ii, Q, pls. i-viii.

Cope, E. D. 1882 D, p. 474.

1884 O, p. 892.

1888 D, p. 256.

Flower and Lydekker 1891 A, p. 540.

Gill, T. 1872 B, p. 57.

Gray, J. E. 1869 A, p. 211.

Haeckel, E. 1895 A, p. 578. (Hyænida.)

Lydekker, R. 1884 A, p. 274.

1885 B, p. 68.

Mivart, St. G. 1881 A.

1882 A.

Nicholson and Lydekker 1889 A, p. 1440.

Owen, R. 1845 B, p. 482.

Roger, O. 1896 A, p. 65.

Schlosser, M. 1888 B, pp. 4, 14.

1890 B, p. 24.

1890 C, p. 265.

Tomes, C. S. 1898 A, p. 467.

Trouessart, E. L. 1897 A, p. 317.

Turner, H. N. 1848 A.

Waterhouse, G. R. 1839 A.

Winge, H. 1895 B, pp. 47, 59.

Woodward, A. S. 1898 B, p. 397.

Zittel, K. A. 1893 B, p. 660.

BOROPHAGUS Cope. Type *B. diversidens* Cope.

Cope, E. D. 1892 Y, p. 1028.

1892 I, p. 326.

1893 A, p. 52.

Borophagus diversidens Cope.

Cope, E. D. 1892 Y, p. 1028.

Cope, E. D. 1892 I, p. 326.

1893 A, p. 54, pl. xiii, fig. 4.

Matthew, W. D. 1899 A, p. 75.

Roger, O. 1896 A, p. 66. [Hyaena (Borophagus).]

Trouessart, E. L. 1897 A, p. 320.

Pliocene (Blanco); Texas.

Superfamily *ÆLUROIDEA* Flower.

- Flower, W. H. 1869 B, p. 22.
 Cope, E. D. 1882 D, p. 473. (Epimyceteri.)
 1884 O, pp. 890, 892. (Epimyceteri.)
 Flower, W. H. 1883 D, p. 434.
 Flower and Lydekker 1891 A, p. 501.
 Huxley, T. H. 1872 A, p. 358.
- Mivart, St. G. 1881 A, p. 474.
 1882 A.
 Schlosser, M. 1888 B, p. 6.
 1890 C, p. 265.
 Tims, H. W. M. 1896 B, p. 462.

FELIDÆ.

- Adams, G. I. 1896 A.
 Baird, S. F. 1857 A, p. 80.
 Blainville, H. M. D. 1864 A, ii, O, pls. i-xix.
 Cope, E. D. 1879 F.
 1880 D, pp. 834, 851.
 1881 C.
 1882 D, p. 474.
 1884 O, pp. 263, 892.
 1888 D.
 Cuvier, G. 1834 A, vii, p. 361.
 Flower, W. H. 1876 B, xiii, p. 488.
 1883 D, p. 434.
 Flower and Lydekker 1891 A, p. 502.
 Gill, T. 1872 B, p. 57.
 Gray, J. E. 1869 A, p. 5.
 Haeckel, E. 1895 A, p. 587. (Felida.)
 Lydekker, R. 1884 A, p. 313.
 Mivart, St. G. 1881 A, p. 439.
 1882 A.
 Nicholson and Lydekker 1889 A, p. 1443.
- Osborn and Wortman 1892 A, p. 94.
 Owen, R. 1845 B, p. 486.
 Parsons, F. G. 1899 A.
 1900 A.
 Roger, O. 1889 A.
 1896 A, p. 66.
 Scheidt, P. 1894 A.
 Schlosser, M. 1888 B, pp. 4, 14.
 1890 B, p. 34.
 Scott, W. B. 1889 B, p. 235.
 Slade, D. D. 1890 A.
 Steinmann and Döderlein 1890 A, p. 725.
 Toms, C. S. 1898 A, p. 469.
 Turner, H. N. 1848 A.
 Waterhouse, G. R. 1839 A.
 Weyhe, —, 1875 A, p. 116.
 Williston, S. W. 1898 K.
 Winge, H. 1895 B, pp. 47, 53.
 Woodward, A. S. 1898 B, p. 398.
 Zittel, K. A. 1893 B, pp. 663, 677.

MACHAIRODONTINÆ.

- Adams, G. I. 1896 A, p. 443. (Machærodontinæ.)
 Cope, E. D. 1880 D, p. 835. (Nimravidæ.)
 1881 C. (Nimravidæ.)
 1882 D, p. 474. (Nimravidæ.)
 1884 O, pp. 892, 947. (Nimravidæ.)
 Gill, T. 1872 B, pp. 59, 60. (Machærodontinæ.)
 Lydekker, R. 1885 E, p. 469. (Nimravidæ.)
 Mivart, St. G. 1881 A, p. 439. (Nimravidæ.)
 Nicholson and Lydekker 1889 A, p. 1443. (Nimravidæ.)
 Osborn and Wortman 1892 A. (Nimravidæ.)
 Roger, O. 1896 A, p. 67. (Machærodontinæ.)
 Schlosser, M. 1890 B, p. 38. (Nimravidæ.)
- Scott, W. B. 1888 A. (Nimravidæ.)
 1889 B, p. 238. (Nimravidæ.)
 1892 A, p. 425. (Nimravidæ.)
 1898 B, p. 404.
 Scott and Osborn 1887 B, p. 153. (Nimravidæ.)
 Steinmann and Döderlein 1890 A, p. 726. (Nimravidæ.)
 Trouessart, E. L. 1897 A, p. 343. (Machærodontinæ.)
 Winge, H. 1895 B, pp. 47, 55, 56.
 Woodward, A. S. 1898 B, p. 399. (Nimravidæ, or Machærodontidæ.)
 Zittel, K. A. 1893 B, p. 667.

MACHAIRODUS Kaup. Type *M. neogæus* Lund.

- Kaup, J., 1833 Oss. foss. Mus. Darmstadt.
 The name of this genus is commonly spelled *Machærodus*.
 Adams, G. I. 1896 A, p. 432.
 1897 A, p. 147.
 Brown, H. G. 1838 A, p. 1277, pl. xlv, fig. 4.
 Burmeister, H. 1866 B, p. 123.
 1879 B, p. 106.
 Cope, E. D. 1879 F, p. 171.
 Dawkins and Sanford 1872 A, p. 184.
 Filhol H. 1891 A, p. 47.
 Gervais, P. 1859 A, p. 230.
 Hartmann, R. 1893 A.
 Kittl, E. 1887 A, p. 321.
 Leidy, J. 1854 A, pp. 95, 115.

- Lydekker, R. 1884 A, p. 332.
 1885 B, p. 41.
 March, O. C. 1877 E.
 Nicholson and Lydekker 1889 A, p. 1449.
 Owen, R. 1845 B, p. 490.
 1846 B, p. 174.
 1847 C, p. 67.
 1868 A, p. 339.
 Pictet, F. J. 1853 A, p. 230.
 Quenstedt, F. A. 1885 A, p. 42.
 Steinmann and Döderlein 1890 A, p. 727.
 Trouessart, E. L. 1897 A, p. 347.
 Winge, H. 1895 B, pp. 47, 56, 91.
 Zittel, K. A. 1893 B, p. 673.

Machairodus gracilis Cope.

- Cope, *E. D.* 1880 D, p. 857. (Smilodon.)
 1895 F, p. 448. (Smilodon.)
 1899 A, p. 240, pl. xx, fig. 1.
 Cope and Wortman 1884 A, p. 5. (Smilodon.)
 Cragin, F. W. 1892 B, p. 17. (Machærodus.)
 Lydekker, R. 1884 A, p. 333. (Machærodus.)
 Roger, O. 1896 A, p. 70. (Machairodus.)
 Trouessart, E. L. 1897 A, p. 849.
 Pleistocene; Pennsylvania.

Machairodus mercerii Cope.

- Cope, *E. D.* 1895 F, p. 448. (Uncia.)
 1896 F, p. 392. (Uncia mercerii, in part.)
 1899 A, p. 240 (Machærodus); p. 245, pl. xx,
 figs. 2-2c (Smilodon).
 Roger, O. 1896 A, p. 72. (Felis.)
 Trouessart, E. L. 1897 A, p. 351. (Felis.)
 Pleistocene; Pennsylvania.

ÆLUROTHERIUM Adams. Type *Patriofelis leidyana* Osb. and Wort.

Adams, G. I. 1896 A, p. 442.

Ælurotherium leidyana (Osb. and Wort.).

- Osborn and Wortman 1892 A, p. 98, fig. 5. (Patriofelis.)
 Adams, G. I. 1896 A, p. 442.

- Matthew, W. D. 1899 A, p. 41.
 Roger, O. 1896 A, p. 37. (Patriofelis.)
 Scott, W. B. 1892 B, p. 313. (Genus doubtful.)
 Trouessart, E. L. 1897 A, p. 231 (Patriofelis); p. 344 (Ælurotherium).
 Wortman, J. L. 1894 A, p. 164. (Not Patriofelis.)
 Eocene (Bridger); Wyoming.

EUSMILUS Gerv. Type *E. bidentatus* (Filhol).

- Gervais, 1875, Jour. Zool., iv, p. 419.
 Cope, E. D. 1884 O, p. 948.
 Flower, W. H. 1883 D, p. 435.
 Flower and Lydekker 1891 A, p. 524.
 Hatcher, J. B. 1895 A.
 Lydekker, R. 1884 A, p. 332.
 Mivart, St. G. 1881 A, p. 437.
 Schlosser, M. 1890 B, p. 48.
 Trouessart, E. L. 1897 A, p. 346.

Zittel, K. A. 1893 B, p. 672.

Eusmilus dakotensis Hatcher.

- Hatcher, J. B. 1895 B.
 Adams, G. I. 1896 B, p. 48, pl. ii, fig. 8.
 Matthew, W. D. 1899 A, p. 55.
 Trouessart, E. L. 1897 A, p. 346.
 Oligocene (White River); South Dakota.

HOPLOPHONEUS Cope. Type *Machærodus oreodontis* Cope.

- Cope, *E. D.* 1874 B, p. 509.
 Adams, G. I. 1896 A.
 1896 B.
 Cope, E. D. 1879 F, pp. 170, 171.
 1880 D, pp. 836, 849.
 1881 C, p. 167.
 1884 O, pp. 948, 992.
 Flower and Lydekker 1891 A, p. 524.
 Leidy, J. 1869 A, p. 53. (Drepanodon.)
 1871 C, p. 343. (Drepanodon.)
 Mivart, St. G. 1881 A, pp. 433, 439.
 Nicholson and Lydekker 1889 A, p. 1446.
 Osborn and Wortman 1894 A, p. 227.
 Schlosser, M. 1890 B, p. 48.
 Scott, W. B. 1889 B.
 1898 B, p. 411.
 Scott and Osborn 1887 B, p. 153, text fig. 2.
 Steinmann and Döderlein 1890 A, p. 727.
 Williston, S. W. 1895 A, p. 170. (Dinotomius, type *D. atrox* Willist.)
 Winge, H. 1895 B, pp. 47, 55, 91.
 Wortman, J. L. 1893 A.
 Zittel, K. A. 1893 B, p. 672.

Hoplophoneus catocopsis (Cope).

- Cope, *E. D.* 1887 P, p. 1019. (Machærodus.)
 Adams, G. I. 1896 A, p. 433.
 Cope, E. D. 1892 AA. (Machærodus.)
 Matthew, W. D. 1899 A, p. 68. (Machærodus.)
 Roger, O. 1896 A, p. 70. (Machairodus.)
 Trouessart, E. L. 1897 A, p. 346.
 Miocene (Loup Fork); Kansas.

Hoplophoneus cerebralis Cope.

- Cope, *E. D.* 1880 F, p. 143. (Machærodus.)
 Adams, G. I. 1896 A, p. 429, pl. xi, fig. 1.
 1896 B, p. 50, pl. i, fig. 1.
 Cope, E. D. 1880 D, p. 850.
 1884 O, pp. 976, 997, pl. lxxv, figs. 3-5.
 Matthew, W. D. 1899 A, p. 63.
 Roger, O. 1896 A, p. 68.
 Trouessart, E. L. 1897 A, p. 345.
 Miocene (John Day); Oregon.

Hoplophoneus crassidens (Cragin).

- Cragin, F. W. 1892 B, p. 17. (Machærodus.)
 Adams, G. I. 1896 A, p. 433.
 Matthew, W. D. 1899 A, p. 55.
 Trouessart, E. L. 1897 A, p. 346.
 Williston, S. W. 1895 A, p. 174, pl. xix. (Machærodus.)
 Miocene? (Loup Fork?); Kansas.

Hoplophoneus insolens Adams.

- Adams, G. I. 1896 A, p. 429, pl. xi, fig. 5.
 1896 B, p. 48, pl. i, fig. 5.
 Matthew, W. D. 1899 A, p. 55.
 Osborn and Wortman 1894 A, p. 227. (H. occidentalis, not of Leidy.)
 Trouessart, E. L. 1897 A, p. 346.
 Oligocene (White River); South Dakota.

Hoplophoneus occidentalis (Leidy).

- Leidy, J. 1869 A, pp. 63, 367, pl. v, fig. 5. (Drepanodon.)

- Adams, G. I. 1896 A, p. 428, pl. xi, fig. 6.
 1896 B, p. 47, pl. i, fig. 6; pl. ii, figs. 1, 2.
 Cope, E. D. 1884 O, p. 993.
 Leidy, J. 1866 A, p. 345. (*Drepanodon occidentalis*; no description.)
 1871 C, p. 343. (*Drepanodon*.)
 Matthew, W. D. 1899 A, p. 54.
 Riggs, E. S. 1896 A, pl. 1.
 Roger, O. 1896 A, p. 68.
 Scott and Osborn 1887 B, p. 154.
 Trouessart, E. L. 1897 A, p. 346.
 Williston, S. W. 1895 A, p. 170, pl. xviii. (*Dinotomius atrox*.)
 1898 K, p. 349, figure.
 Oligocene (White River); South Dakota.

Hoplophoneus oreodontis Cope.

- Cope, E. D.* 1873 CC, p. 9. (*Machærodus*.)
 Adams, G. I. 1896 A, p. 429, pl. xi, fig. 2.
 1896 B, p. 50, pl. i, fig. 2.
 Bruce, A. T. 1883 A, p. 42, fig. 8.
 Cope, E. D. 1874 B, p. 509.
 1874 P, p. 23.
 1880 D, p. 850.
 1884 O, pp. 976, 993, pl. lxxvii, fig. 17; pl. lxxv, figs. 1, 2.
 Matthew, W. D. 1899 A, p. 55.
 Mivart, St. G. 1881 A, p. 434, fig. 185.
 Roger, O. 1896 A, p. 68.
 Trouessart, E. L. 1897 A, p. 345.
 Oligocene (White River); Colorado.

Hoplophoneus primævus (Leidy).

- Leidy, J.* 1851 H, p. 329. (*Machairodus*.)
 Adams, G. I. 1896 A, p. 419, pl. x; pl. xi, fig. 3.
 1896 B, p. 49, pl. i, fig. 4.
 Cope, E. D. 1880 D, p. 850.
 1884 O, p. 993.
 Hayden, F. V. 1858 B, p. 158.
 King, C. 1878 A, p. 411. (*Drepanodon*.)

- Leidy, J. 1852 J, p. 564, pl. xii A, fig. 5. (*Machairodus*.)
 1853 D, p. 392. (*Machairodus*.)
 1854 A, pp. 94, 115, pl. xviii. (*Machairodus*.)
 1854 E, p. 156. (*Machairodus*.)
 1857 D, p. 176. (*Drepanodon*.)
 1869 A, pp. 54, 367, pl. i, fig. 8. (*Drepanodon*.)
 1871 C, p. 343. (*Drepanodon*.)
 Matthew, W. D. 1899 A, p. 75.
 Osborn, H. F. 1898 Q, p. 11.
 Roger, O. 1896 A, p. 68.
 Scott and Osborn, 1887 B, p. 153, pl. i.
 Trouessart, E. L. 1897 A, p. 345.
 Oligocene (White River); South Dakota.

Hoplophoneus robustus Adams.

- Adams, G. I.* 1896 B, p. 49, pl. i, fig. 4.
 1896 A, p. 428, pl. xi, fig. 4.
 Leidy, J. 1869 A, p. 54 (in part); pl. iv, fig. 1.
 Matthew, W. D. 1899 A, p. 55.
 Osborn and Wortman 1894 A, p. 227. (*H. primævus*, not of Leidy.)
 Trouessart, E. L. 1897 A, p. 346.
 Oligocene (White River); South Dakota, Nebraska.

Hoplophoneus strigidens Cope.

- Cope, E. D.* 1879 D, p. 71. (*Machærodus*.)
 Adams, G. I. 1896 A, p. 429.
 Cope, E. D. 1879 B, p. 56. (*Machærodus*.)
 1879 X, p. 798a. (*Machærodus*.)
 1880 D, p. 851.
 1884 O, p. 1001, pl. lxxv, fig. 6.
 Matthew, W. D. 1899 A, p. 63.
 Roger, O. 1896 A, p. 68.
 Trouessart, E. L. 1897 A, p. 346.
 Miocene (John Day); Oregon.
 The generic position of this species is doubtful.

DEINICTIS Leidy. Type *D. felina* Leidy.

Leidy, J. 1856 H, p. 91.

Most authors have adopted the spelling *Deinictis*. The original name is *Deinictis*.

- Adams, G. I. 1896 A.
 Allen, H. 1888 A.
 Cope, E. D. 1873 T, p. 2. (*Daptophilus*, type *D. squalidens* Cope.)
 1874 B, p. 508. (*Daptophilus*.)
 1879 F, pp. 169, 170.
 1880 D, pp. 836, 845 (Dinictis); pp. 836, 847 (Pogonodon).
 1880 F, p. 143 (Dinictis; Pogonodon, type *P. platycopis*).
 1881 C, p. 167. (Dinictis, Pogonodon.)
 1884 O, pp. 948, 973 (Dinictis); pp. 948, 981 (Pogonodon).
 Flower and Lydekker 1891 A, p. 523 (Dinictis); p. 524 (Pogonodon).
 Gaudry, A. 1878 B, p. 220. (Dinictis).
 Leidy, J. 1854 D, p. 127. (Dinictis; no description.)
 1869 A, p. 64. (Dinictis.)

- Leidy, J. 1871 C, p. 343. (Dinictis.)
 Mivart, St. G. 1881 A, pp. 435, 439 (Dinictis); pp. 437, 439 (Pogonodon).
 Nicholson and Lydekker 1889 A, p. 1444 (Dinictis); p. 1446 (Pogonodon).
 Schlosser, M. 1890 B, p. 42.
 Scott, W. B. 1892 A, p. 425.
 Steinmann and Döderlein, 1890 A, p. 726 (Dinictis); p. 727 (Pogonodon).
 Trouessart, E. L. 1897 A, p. 344.
 Williston, S. W. 1895 A, p. 173, figure.
 Winge, H. 1895 B, pp. 47, 55, 91.
 Zittel, K. A. 1893 B, p. 669 (Dinictis); p. 671 (Pogonodon).

Deinictis bombifrons Adams.

- Adams, G. I.* 1895 A, p. 577, pl. xxvi. (Dinictis.)
 Matthew, W. D. 1899 A, p. 54. (Dinictis.)
 Roger, O. 1896 A, p. 68. (Dinictis.)
 Trouessart, E. L. 1897 A, p. 345. (Dinictis.)
 Oligocene (White River); South Dakota?

Deinictis brachyops (Cope).

- Cope, E. D. 1879 D, p. 72, in part. (Machærodus.)
 Adams, G. I. 1896 A, p. 431, pl. xii, fig. 5. (Dinictis.)
 Cope, E. D. 1879 B, p. 56. (Hoplophoneus.)
 1879 K, p. 197. (Hoplophoneus.)
 1880 D, pp. 843, 849, fig. 11. (Pogonodon.)
 1884 O, pp. 972, 987, pl. lxxiv, figs. 3-10. (Pogonodon.)
 Matthew, W. D. 1899 A, p. 63. (Pogonodon.)
 Roger, O. 1896 A, p. 68. (Pogonodon.)
 Trouessart, E. L. 1897 A, p. 345. (Dinictis.)
 Miocene (John Day); Oregon.

Deinictis cyclops Cope.

- Cope, E. D. 1879 F, p. 176. (Dinictis.)
 Adams, G. I. 1896 A, p. 430, pl. xii, fig. 2. (Dinictis.)
 Cope, E. D. 1880 D, p. 846, fig. 8. (Dinictis.)
 1884 O, p. 974, pl. lxxv, fig. 1. (Dinictis.)
 Matthew, W. D. 1899 A, p. 63.
 Mivart, St. G. 1881 A, p. 435. (Dinictis.)
 Roger, O. 1896 A, p. 67.
 Trouessart, E. L. 1897 A, p. 344. (Dinictis.)
 Zittel, K. A. 1893 B, p. 670, fig. 560. (Dinictis.)
 Oligocene (John Day); Oregon.

Deinictis felina Leidy.

- Leidy, J. 1856 H, p. 91.
 Adams, G. I. 1896 A, p. 430, pl. xii, fig. 3. (Dinictis.)
 Cope, E. D. 1879 F, p. 176. (Dinictis.)
 1880 D, p. 846. (Dinictis.)
 1884 O, pp. 974, 978. (Dinictis.)
 Gaudry, A. 1878 B, p. 220, fig. 292.
 Hayden, F. V. 1858 B, p. 158.
 King, C. 1878 A, p. 411. (Dinictis.)
 Leidy, J. 1854 D, p. 127. (Dinictis; no description.)
 1869 A, pp. 64, 368, pl. v, figs. 1-4. (Dinictis.)
 1871 C, p. 343. (Dinictis.)
 Matthew, W. D. 1899 A, p. 54. (Dinictis.)
 Roger, O. 1896 A, p. 67. (Dinictis.)
 Schlosser, M. 1890 B, p. 41.
 Scott, W. B. 1889 A. (Dinictis.)
 Scott and Osborn 1887 B, p. 153. (Dinictis.)
 Trouessart, E. L. 1897 A, p. 344. (Dinictis.)
 Zittel, K. A. 1893 B, p. 669, fig. 559. (Dinictis.)
 Oligocene (White River); South Dakota, Colorado.

Deinictis fortis Adams.

- Adams, G. I. 1895 A, p. 574, text fig. 1. (Dinictis.)
 1896 A, pp. 430, 436, pl. xii, fig. 4. (Dinictis.)
 Matthew, W. D. 1899 A, p. 54. (Dinictis.)
 Roger, O. 1896 A, p. 68. (Dinictis.)
 Trouessart, E. L. 1897 A, p. 345. (Dinictis.)
 Oligocene (White River); Colorado.

Deinictis major Lucas.

- Lucas, F. A. 1898 A, p. 399. (Dinictis.)
 Oligocene (White River); Nebraska.

Deinictis paucidens Riggs.

- Riggs, E. S. 1896 B, p. 237. (Dinictis.)
 Adams, G. I. 1896 A, p. 436, footnote. (Syn. of D. fortis.)
 Matthew, W. D. 1899 A, p. 54. (Dinictis.)
 Oligocene (White River).

Deinictis platycopis (Cope).

- Cope, E. D. 1879 X, p. 798b. (Hoplophoneus.)
 Adams, G. I. 1896 A, p. 431, pl. xii, fig. 6. (Dinictis.)
 Cope, E. D. 1879 E, p. 373. (Hoplophoneus.)
 1880 D, p. 847, fig. 9. (Pogonodon.)
 1880 F, p. 143. (Pogonodon.)
 1884 O, p. 982, text fig. 38, pl. lxxiva. (Pogonodon.)
 Matthew, W. D. 1899 A, p. 63. (Pogonodon.)
 Mivart, St. G. 1881 A, p. 189. (Pogonodon.)
 Roger, O. 1896 A, p. 68. (Pogonodon.)
 Trouessart, E. L. 1897 A, p. 345. (Dinictis.)
 Zittel, K. A. 1893 B, p. 671, fig. 562. (Pogonodon platycopis.)
 Miocene (John Day); Oregon.

Deinictis squalidens Cope.

- Cope, E. D. 1873 T, p. 2. (Daptophilus.)
 Adams, G. I. 1896 A, p. 430, pl. xii, fig. 1. (Dinictis.)
 Cope, E. D. 1873 CC, p. 9. (Daptophilus.)
 1874 B, p. 508. (Daptophilus.)
 1879 F, p. 176. (Dinictis.)
 1880 D, p. 847. (Dinictis.)
 1884 O, pp. 974, 979, pl. lxxvii, figs. 15, 16. (Dinictis.)
 Matthew, W. D. 1899 A, p. 54. (Dinictis.)
 Roger, O. 1896 A, p. 68. (Dinictis.)
 Trouessart, E. L. 1897 A, p. 344. (Dinictis.)
 Oligocene (White River); Colorado.

SMILODON Lund. Type *S. populator* Lund.

- Lund, P. W. 1842 A, p. 193.
 Adams, G. I. 1896 A, p. 433.
 1897 A, p. 147.
 Ameghino, F. 1889 A, p. 333.
 Blainville, H. M. D. 1864 A, iv, EE, p. 7, pl. xx.
 Cope, E. D. 1880 D, p. 854.
 1881 C, p. 166.
 1896 A, p. 240.
 Filhol, H. 1888 B, p. 129. (On Machairodus bidentatus.)
 Gervais P. 1878 A.
 Gervais and Ameghino 1880 A, p. 11.
 Leidy, J. 1868 A, p. 175. (Trucifelis, as subgenus, with *Felis fatalis* as type.)
 1869 A, p. 366. (Trucifelis.)

- Lydekker, R. 1885 B, p. 41. (Syn. of Machærodus.)
 Nicholson and Lydekker 1889 A, p. 1449.
 Owen, R. 1847 C, p. 67.
 Zittel, K. A. 1893 B, p. 675. (Syn. of Machairodus.)

Smilodon fatalis (Leidy).

- Leidy, J. 1868 A, p. 175. [Felis (Trucifelis).]
 Adams, G. I. 1896 A, p. 433.
 Cope, E. D. 1880 D, p. 857.
 1899 A, p. 240.
 Cope and Wortman 1884 A, p. 5.
 Leidy, J. 1869 A, p. 366, pl. xxvii, figs. 10, 11. (Trucifelis.)
 1873 B, p. 260. (Trucifelis.)
 Lydekker, R. 1884 A, p. 333. (Machærodus.)

Roger, O. 1896 A, p. 70. (Machairodus.)
 Trouessart, E. L. 1897 A, p. 349.
 Pleistocene; Texas.

Smilodon floridanus (Leidy).

Leidy, J. 1889 A, p. 29. (Drepanodon or Machairodus.)
 Adams, G. I. 1896 A, p. 433.

Cope, E. D. 1892 AA. (Machærodus.)
 Leidy, J. 1889 D, p. 14, pl. iii, fig. 1. (Machairodus.)
 1892 A. (Machairodus.)
 Roger, O. 1896 A, p. 70. (Machairodus.)
 Trouessart, E. L. 1897 A, p. 349.
 Zittel, K. A. 1893 B, p. 675. (Machairodus.)
 Pleistocene; Florida.

DINOBASTIS Cope. Type *D. serus* Cope.

Cope, E. D. 1893 K, p. 896.
 Adams, G. I. 1896 A, pp. 433, 435.
 1897 A, p. 145. (Syn. of Smilodon.)
 Cope, E. D. 1894 H, p. 454.

Dinobastis serus Cope.

Cope, E. D. 1893 K, p. 896.

Cope, E. D. 1894 A, p. 68.
 1894 H, p. 454, pl. xxi, figs. 1-13.
 Roger, O. 1896 A, p. 70.
 Trouessart, E. L. 1897 A, p. 349.
 Pleistocene; Kansas, Oklahoma.

ARCHÆLURUS Cope. Type *A. debilis* Cope.

Cope, E. D. 1879 X, p. 798a.
 Adams, G. I. 1896 A, p. 438.
 Allen, H. 1888 A.
 Cope, E. D. 1879 E, p. 372.
 1880 D, p. 836, 841.
 1881 C, p. 167.
 1884 O, pp. 948, 952.
 Flower and Lydekker 1891 A, p. 524.
 Mivart, St. G. 1881 A, pp. 436, 439.
 Nicholson and Lydekker 1889 A, p. 1446.
 Schlosser, M. 1890 B, p. 40.
 Winge, H. 1895 B, pp. 47, 55, 91.
 Zittel, K. A. 1893 B, p. 672.

Archælorus debilis Cope.

Cope, E. D. 1879 X, p. 798a.

Cope, E. D. 1879 D, p. 72. (Part of Machærodus brachyops, "female skull.")
 1879 E, p. 372.
 1880 D, p. 842, figs. 3, 4, 7.
 1881 J, p. 546, fig. 7.
 1884 O, p. 953, pl. lxxia, figs. 8-16.
 1889 C, p. 190.
 Matthew, W. D. 1899 A, p. 63.
 Mivart, St. G. 1881 A, p. 436, fig. 188.
 Roger, O. 1896 A, p. 68.
 Trouessart, E. L. 1897 A, p. 343. (Exclusive of Pseudælorus intrepidus.)
 Miocene (John Day); Oregon.

NIMRAVUS Cope. Type *N. gomphodus* Cope.

Cope, E. D. 1879 F, pp. 169, 170.
 Adams, G. I. 1896 A, p. 438.
 1897 A, p. 146.
 Cope, E. D. 1880 D, pp. 836, 843.
 1881 C, p. 167.
 1884 O, pp. 948, 963.
 Flower and Lydekker 1891 A, p. 524.
 Lydekker, R. 1887 A, p. 313.
 Mivart, St. G. 1881 A, pp. 435, 439.
 Nicholson and Lydekker 1889 A, p. 1446.
 Winge, H. 1895 B, pp. 47, 55, 91.
 Zittel, K. A. 1893 B, p. 671.

Nimravus confertus Cope.

Cope, E. D. 1880 D, p. 844, fig. 10.
 Adams, G. I. 1897 A, p. 149, fig. 5.
 Cope, E. D. 1881 C, p. 172.
 1884 O, p. 972, pl. lxxia, fig. 17.
 Matthew, W. D. 1899 A, p. 63.

Roger, O. 1896 A, p. 68.
 Trouessart, E. L. 1897 A, p. 344.
 Miocene (John Day); Oregon.

Nimravus gomphodus Cope.

Cope, E. D. 1880 D, p. 844, figs. 6, 7.
 Adams, G. I. 1897 A, p. 149, fig. 4.
 Cope, E. D. 1879 F, p. 170. (N. brachyops; not Deinietis brachyops.)
 1881 C, p. 171.
 1881 J, p. 546, fig. 8.
 1884 O, p. 964, pl. lxxia, figs. 1-3; pl. lxxiii.
 Matthew, W. D. 1899 A, p. 63.
 Mivart, St. G. 1881 A, p. 434, fig. 186. (N. brachyops.)
 Roger, O. 1896 A, p. 68.
 Trouessart, E. L. 1897 A, p. 344.
 Zittel, K. A. 1893 B, p. 673, fig. 563.
 Miocene (John Day); Oregon.

FELINÆ.

Adams, G. I. 1896 A, p. 444.
 Gill, T. 1872 B, p. 59.
 Roger, O. 1896 A, p. 66 (Proælorinæ.); p. 67 (Machairodinæ, in part.)

Trouessart, E. L. 1897 A, p. 350.
 Zittel, K. A. 1893 B, p. 676.

PSEUDÆLURUS Gervais. Type *Felis quadridentata* Blainv.

- Gervais, P., 1848-1852, Zool. et Paléont. franç., 1st edition, p. 127.
 Adams, G. I. 1897 A, p. 145.
 Cope, E. D. 1879 F, p. 170.
 1881 C, p. 167.
 1884 O, p. 948.
 Depéret, C. 1892 A, p. 20.
 Filhol, H. 1872 A, p. 3.
 1876 A, p. 158.
 1891 A, p. 73.
 Gervais, P. 1859 A, p. 232.
 Leidy, J. 1869 A, p. 52.
 1871 C, p. 343.
 Lydekker, R. 1884 A, p. 314.
 1885 B, p. 64.
 Mivart, St. G. 1881 A, p. 434.
 Schlosser, M. 1890 B, p. 39.
 Trouessart, E. L. 1897 A, p. 350.

- Winge, H. 1895 B, pp. 47, 54, 78, 91.
 Zittel, K. A. 1893 B, p. 666.

Pseudælorus intrepidus Leidy.

- Leidy, J. 1858 E, p. 22. [*Felis* (*Pseudælorus*).]
 Cope, E. D. 1879 X, p. 798a.
 Hayden, F. V. 1858 B, p. 158. [*Felis* (*Pseudælorus*).]
 King, C. 1878 A, p. 411. (*Drepanodon*).
 Leidy, J. 1869 A, pp. 52, 367, pl. i, fig. 8.
 1871 C, p. 343.
 Matthew, W. D. 1899 A, p. 68.
 Roger, O. 1896 A, p. 67.
 Schlosser, M. 1890 B, p. 40.
 Scott and Osborn 1890 B, p. 71.
 Trouessart, E. L. 1897 A, p. 343. (Syn. of *Archælorus debilis*.)
 Miocene (Loup Fork); Nebraska, Colorado.

FELIS¹ Linn. Type *F. catus* Linn.

- Linnæus, C., 1758, Syst. Nat., ed. 10, i, p. 41.
 Baird, S. F. 1857 A, p. 81.
 Blainville, H. M. D. 1864 A, ii, O, p. 1, pl. xix.
 Cope, E. D. 1879 F, pp. 170, 171.
 1899 A, p. 247. (*Felis*, *Uncia*.)
 Flower, W. H. 1869 B, p. 15.
 1883 D, p. 434.
 1885 A.
 Flower and Lydekker 1891 A, p. 502.
 Leche, W. 1895 A, p. 56.
 Mivart, St. G. 1881 A.
 1882 A.
 Nicholson and Lydekker 1889 A, p. 1447.
 Owen, R. 1866 B
 1868 A.
 Pictet, F. J. 1853 A, p. 225.
 Trouessart, E. L. 1897 A, p. 351.
 Williston, S. W. 1898 K.
 Winge, H. 1895 B, pp. 54, 91, 100, 101.
 Zittel, K. A. 1893 B, p. 676.

Felis atrox Leidy.

- Leidy, J. 1853 F, p. 34.
 Cope, E. D. 1880 D, p. 858. (*Uncia*.)
 1899 A, p. 249. (*Uncia*.)
 Cope and Wortman 1884 A, p. 5.
 Leidy, J. 1860 B, p. 103.
 1869 A, p. 365.
 Roger, O. 1896 A, p. 72.
 Trouessart, E. L. 1897 A, p. 351.
 Wailes, B. L. C. 1854 A, p. 286.

Felis augustus Leidy.

- Leidy, J. 1872 E, p. 39.
 Cope, E. D. 1880 D, p. 858. (*Uncia*.)
 Leidy, J. 1873 B, pp. 227, 315, pl. vii, figs. 18, 19;
 pl. xx, fig. 24.
 Matthew, W. D. 1899 A, p. 68. (*Felis*?).
 Roger, O. 1896 A, p. 73. (*F. angusta*.)
 Trouessart, E. L. 1897 A, p. 351.
 Zittel, K. A. 1893 B, p. 677. (*F. angustus*.)
 Miocene (Loup Fork); Nebraska.

Felis calcaratus Cope.

- Cope, E. D. 1899 A, p. 250, pl. xxi, figs. 2, 2a.
 1895 F, p. 448. (*F. rufus*, not of authors.)
 Pleistocene; Pennsylvania.

Felis concolor Linn.

- Linnæus, C., 1771, Mantissa, p. 522.
 Baird, S. F. 1857 A, p. 83, pl. lxxi.
 Giebel, C. G. 1872 A, p. 431.
 Leidy, J. 1888 A, p. 9.
 Trouessart, E. L. 1897 A, p. 352.
 True, F. W. 1891 A, p. 591.
 Recent; Mexico to Canada. Pleistocene; Illinois.

Felis eyra Desm.

- Baird, S. F. 1857 A, p. 88, pl. lxii, fig. 1.
 Cope, E. D. 1895 F, p. 449.
 1899 A, p. 250.
 Giebel, C. G. 1872 A, p. 431.
 Recent; Guiana to Mexico. Pleistocene; Pennsylvania.

Felis hillianus Cope.

- Cope, E. D. 1892 Y, p. 1029.
 1892 I, p. 327.
 1893 A, p. 55, pl. xiv, figs. 1-11.
 Matthew, W. D. 1899 A, p. 75.
 Roger, O. 1896 A, p. 72.
 Trouessart, E. L. 1897 A, p. 351.
 Pliocene (Blanco); Texas.

Felis imperialis Leidy.

- Leidy, J. 1873 F, p. 259.
 Adams, G. I. 1896 A, p. 434.
 Leidy, J. 1873 B, pp. 228, 315, pl. xxxi, fig. 3.
 Roger, O. 1896 A, p. 73.
 Trouessart, E. L. 1897 A, p. 351.
 Whitney, J. D. 1879 A, p. 246.
 Yates, L. G. 1874 B, p. 18.
 Pleistocene; California.

¹ Besides the species below recorded, Dr. Leidy (1889 H, p. 5) has reported *F. canadensis* from a cave in Pennsylvania.

Felis inexpectatus (Cope).

- Cope, E. D. 1895 F, p. 449. (Crocota.)
 1896 F, p. 392. (Uncia merceii, in part.)
 1899 A, p. 247, pl. xxi, figs. 1-1f. (Uncia.)
 Lydekker, R., 1896, Zool. Record for 1895, Mamm., p. 28. (Nimravus?).
 Roger, O. 1896 A, p. 66 (Hyaena crocuta inexpectata).
 Trouessart, E. L. 1897 A, p. 351. (Syn. of Felis merceii.)
 Pleistocene; Pennsylvania.

Felis? maximus Scott and Osb.

- Scott and Osborn 1890 B, p. 70, figs. 4, 5.

- Adams, G. I. 1896 A, p. 434. (Genus uncertain.)
 Cragin, F. W. 1892 B, p. 17.
 Matthew, W. D. 1899 A, p. 68. (Felis?).
 Roger, O. 1896 A, p. 72.
 Trouessart, E. L. 1897 A, p. 351.
 Williston, S. W. 1898 K, p. 349.
 Miocene (Loup Fork); Kansas.

Felis ruffus Gldenst.

- Allen, J. A. 1876 C, p. 333. (Lynx rufus.)
 Baird, S. F. 1857 A, p. 90. (Lynx rufus.)
 Trouessart, E. L. 1897 A, p. 368. (F. rufa.)
 Recent; United States to Mexico. Pleistocene?; caves of Pennsylvania, *vide* Allen.

Suborder PINNIPEDIA.

- Allen, J. A. 1880 A.
 Cope, E. D. 1888 CG, p. 310.
 1889 R, p. 876.
 1898 B, pp. 118, 120.
 Flower, W. H. 1883 D, p. 442.
 1885 A.
 Flower and Lydekker 1891 A, p. 592.
 Gadow, H. 1898 A, p. 50.
 Gill, T. 1866 A.
 1872 A.
 1872 B, pp. 56, 68.
 Gray, J. E. 1866 A.
 Gruber, W. 1859 A.
 Haeckel, E. 1895 A, p. 588.
 Huxley, T. H. 1872 A, p. 359.
 Kkenthal, W. 1890 C.
 Leboucq, H. 1888 A, p. 359.
 Lydekker, R. 1896 B.
 Mivart, St. G. 1885 A.

- Murie, J. 1874 A.
 Nicholson and Lydekker 1889 A, p. 1422.
 Osborn, H. F. 1893 D.
 Paulli, S. 1900 B, p. 505.
 Reh, L. 1894 A.
 Roger, O. 1896 A, p. 73.
 Schlosser, M. 1889 A.
 1890 C, p. 266.
 1890 D.
 Smith, J. 1895 A, p. 342.
 Steinmann and Dderlein 1890 A, p. 728.
 Thompson, D' A. W. 1890 A.
 Tomes, C. S. 1898 A, p. 475.
 Tornier, G. 1890 A, p. 449.
 Trouessart, E. L. 1897 A, p. 369.
 Van Beneden, P. J. 1877 A.
 Weber, M. 1886 A, p. 227.
 Wortman, J. L. 1894 A, pp. 157, 162.
 Zittel, K. A. 1893 B, p. 680.

OTARIIDÆ.

- Brookes, 1828, Cat. Anat. Zool. Mus., p. 36. (Otaridæ, *vide* Allen.)
 Allen, J. A. 1880 A, p. 187.
 Flower and Lydekker 1893 A, p. 593.
 Gill, T. 1866 A, p. 7.

- Gill, T. 1872 B, pp. 68, 69.
 Trouessart, E. L. 1897 A, p. 369.
 Winge, H. 1895 B, pp. 47, 70.
 Zittel, K. A. 1893 B, p. 683. (Otaridæ.)

EUMETOPIAS Gill. Type *Arctocephalus monteriensis* Gray = *Otaria stelleri* Lesson.

- Gill, T. 1866 A, pp. 7, 11.
 Allen, J. A. 1880 A, p. 231.
 Flower and Lydekker 1891 A, p. 593. (Otaria, in part.)
 Trouessart, E. L. 1897 A, p. 370.

Eumetopias stelleri (Lesson).

- Allen, J. A. 1880 A, p. 232, fig. 37. (Synonymy and literature.)

- Bowers, S. 1889 A.
 Gray, J. E. 1866 A, p. 60. (Otaria.)
 1872 A, figs. 4, 5.
 Trouessart, E. L. 1897 A, p. 370.
 Recent; Pacific coast from California to Japan. Pleistocene; California, *vide* Bowers.

ODOBENIDÆ.

This name is usually spelled *Odobenidæ*. Unless otherwise indicated, the following authors use the family name *Trichechidæ*.

- Allen, J. A. 1880 A, pp. 3, 5.
 Flower, W. H. 1883 D, p. 443.
 Flower and Lydekker 1891 A, p. 596.
 Gadow, H. 1898 A, p. 51.

- Gill, T. 1866 A, pp. 7, 11. (Rosmaridæ.)
 1872 B, pp. 27, 69, 70. (Rosmaridæ.)
 Gray, J. E., 1821, Lond. Med. Repos., p. 303.
 1825, Ann. Philos., p. 340.
 1866 A, p. 33. (Trichechina.)
 Haeckel, E. 1895 A, p. 590. (Trichechida.)
 Huxley, T. H. 1872 A, p. 360.

Mivart, St. G. 1885 A. (Trichechina.)
 Nicholson and Lydekker 1889 A, pp. 1422, 1424.
 Reh, L. 1894 A, p. 12.
 Roger, O. 1896 A, p. 75.
 Turner, H. N. 1848 A, pp. 85, 88. (Trichecina, subfamily.)

Van Beneden, P. J. 1877 A, p. 89.
 Winge, H. 1895 B, pp. 47, 73. (Trichechini.)
 Wortman, J. L. 1886 A, p. 451.
 Zittel, K. A. 1893 B, p. 685.

ODOBENUS Brisson. Type *Phoca rosmarus* Linn.

Brisson, A. D. 1762, Regnum Anim., ed. ii, pp. 12, 30-31.

Unless otherwise indicated, the following authors refer to this genus under the name *Trichechus*.

Allen, J. A. 1880 A, p. 14. (Odobænus.)
 Blainville, H. M. D. 1864 A, ii, J. (Trichechus.)
 Boyd, C. H. 1881 A.
 Flower and Lydekker 1891 A, p. 597.
 Gill, T. 1866 A, p. 13. (Rosmarus.)
 Gratiolet, P. 1858 A. (Odobenotherium, type *O. lartetianus*.)
 Gray, J. E. 1866 A, p. 35.
 Kükenthal, W. 1894 A, p. 77.
 Mivart, St. G. 1885 A, p. 493.
 Murie, J. 1871 A.
 Nicholson and Lydekker, 1889 A, p. 1424.
 Owen, R. 1845 B, p. 510.
 Palmer, T. S. 1899 A, p. 494.
 Pictet, F. J. 1853 A, p. 233.
 Rhoads, S. N. 1898 A, p. 200. (Rosmarus.)
 Slade, D. D. 1888 A, p. 243.
 Smith, J. 1895 A, p. 339, fig. 7.
 Stannius, H. 1842 B.
 Tomes, C. S. 1898 A, p. 478.
 Trouessart, E. L. 1897 A, p. 375.
 Turner, H. N. 1848 A.
 Van Beneden, P. J. 1877 A, p. 39.
 Wiegmann, F. A. 1838 A, p. 113. (Odobenus.)
 Zittel, K. A. 1893 B, p. 685.

Odobenus rosmarus (Linn.).

Linnæus, C., 1758, Syst. Nat., ed. 10, i, p. 38. (Phoca.)

Unless otherwise indicated, the following authors refer this species to *Trichechus*.

Allen, J. A. 1880 A, p. 23, figs. 15, 16, 18, 20, 23, 25, 26, 28, 30, 32, 34. (Synonymy and literature.)
 Blainville, H. M. D. 1864 A, ii, J, pls. i, iv, vii, ix. (Trichechus.)
 Gervais, P. 1859 A, p. 275. (Trichechus.)
 Giebel, C. G. 1847 A, p. 222.
 Goethe, J. W. 1831 A, p. 8, pl. iv. ("Walross.")
 Gray, J. E. 1866 A, p. 37, fig. 12.
 Gratiolet, P., 1858 A, pl. v. (Odobenotherium lartetianus.)
 Jaeger, G. 1844 A. (Wallross.)
 Kersten, H. 1821 A.
 Kükenthal, W. 1894 A, p. 77.
 Malmgren, A. J. 1864 A, p. 505, pl. vii. (Odobænus.)
 1865 A. (Odobænus.)

Murie, J. 1871 A.

Owen, R. 1853 A.

1866 B, p. 498, fig. 339.

1868 A, p. 338.

Peters, W. 1864 A, plate. (Odobænus rosmarus.)

Reh, L. 1894 A, p. 12.

Rhoads, S. N. 1898 A, p. 200. (Rosmarus.)

Roger, O. 1896 A, p. 75.

Stannius, H. 1842 B.

Trouessart, E. L. 1897 A, p. 375.

Van Beneden, P. J. 1877 A, p. 39, pl. viii, figs. 7-9.

Wiegmann, F. A. 1838 A, p. 113. (Odobenus.)

Recent; shores of Northern Atlantic and Arctic oceans from Labrador to Siberia. Pleistocene; Labrador.

Odobenus virginianus (De Kay).

De Kay, J. E. 1842 C, p. 56, pl. xix, fig. 1. (Trichechus.)

Agassiz, L. 1851 A, p. 252. ("Walrus.")

Allen, J. A. 1880 A, p. 57. (Odobænus.)

Amer. Naturalist 1871 B, p. 316.

Barton, B. S. 1805 A, p. 98. (Trichechus rosmarus.)

Cope, E. D. 1869 N, p. 740. (Trichechus rosmarus.)

1874 T. ("Walrus.")

1878 BB. (Trichechus rosmarus.)

Harlan, R. 1834 B, p. 72. (Trichechus rosmarus.)

1835 B, p. 277. (Trichechus rosmarus.)

Leidy, J. 1857 G, p. 83, pl. iv; pl. v, fig. 1. (Trichechus.)

1869 A, p. 416. (Trichechus rosmarus.)

1876 A, p. 80. ("Walrus.")

1877 A, p. 214, pl. xxx, fig. 6. (Rosmarus obesus.)

Lyell, C. 1843 C, p. 32. (Trichechus rosmarus.)

Mitchell, Smith, and Cooper 1828 A. ("Walrus.")

Newberry, J. S. 1870 C, p. 75. (Trichechus rosmarus.)

1874 D, p. 71. (Trichechus rosmarus.)

Packard, A. S. 1867 A, pp. 243, 246. (Rosmarus obesus.)

Rhoads, S. N. 1898 A, p. 196.

Pleistocene; Maine, Nova Scotia, Massachusetts, New Jersey, Virginia, South Carolina.

Some of the remains described by the above authors may belong to *O. rosmarus*; indeed, it is not certain that any are distinct.

PHOCIDÆ.

Allen, J. A. 1880 A, p. 412.

Blainville, H. M. D. 1864 A, ii, I, p. 5; J, p. 1, pls. i-ix.

Cuvier, G. 1834 A, viii, pl. i, pp. 381-458, with plates,

Flower, W. H. 1883 D, p. 443.

Flower and Lydekker 1891 A, p. 600.

Gill, T. 1866 A, p. 5.

1872 B, pp. 68, 69.

Gray, J. E. 1866 A, p. 1.
 Huxley, T. H. 1872 A, p. 360.
 Kükenthal, W. 1894 A, p. 97.
 Leche, W. 1893 B.
 Mivart, St. G. 1885 A.
 Nicholson and Lydekker 1889 A, p. 1422.
 Owen, R. 1845 B, p. 505.
 1868 A, p. 336.

Reh, L. 1894 A, p. 35.
 Roger, O. 1896 A, p. 73.
 Scott, W. B. 1892 A, p. 424.
 Turner, H. N. 1848 A.
 Van Beneden, P. J. 1877 A.
 Winge, H. 1895 B, pp. 47, 72, 74, 76, 91.
 Zittel, K. A. 1893 B, p. 683.

CYSTOPHORA Nilsson. Type *C. borealis* Nilsson=*Phoca cristata* Erxl.

Nilsson, S., 1820, Skand. Fauna, i, p. 382.
 Allen, J. A. 1880 A, p. 723.
 Flower and Lydekker 1891 A, p. 605.
 Owen, R. 1868 A, p. 337.

Cystophora cristata (Erxl.).

Erxleben, C. P., 1777, Syst. Regn. Anim., p. 590.
 (Phoca.)

Allen, J. A. 1880 A, pp. 470, 724, figs. 52-56. (Synonymy and literature.)
 Leidy, J. 1869 A, p. 416.
 Lyell, C. 1843 C, p. 32. (C. proboscidea.)
 Owen, R. 1866 B, p. 496.
 Trouessart, E. L. 1897 A, p. 378.

Recent; along shores of Northern Atlantic; said by Lyell to have been found in Tertiary strata of Martha's Vineyard.

LOBODON Gray. Type *Phoca carcinophaga* Homb., Jacq.

Gray, J. E., 1844, Zool. Erebus and Terror, i, p. 5.
 Flower and Lydekker 1891 A, p. 605.
 Gray, J. E. 1866 A, p. 8, fig. 2.
 Trouessart, E. L. 1897 A, p. 381. (Subgenus of Ogmorhinus.)

Lobodon vetus Leidy.

Leidy, J. 1853 C, p. 377, figure. (Stenorhynchus.)

Allen, J. A. 1880 A, p. 475.
 Cope, E. D. 1869 N, p. 740.
 Leidy, J. 1865 A, p. 2. (Stenorhynchus.)
 1869 A, p. 415.
 Trouessart, E. L. 1897 A, p. 381. [Ogmorhinus (Lobodon).]
 Miocene?; New Jersey.

PHOCA Linn. Type *P. vitulina* Linn.

Linnaeus, C., 1758, Syst. Nat., ed. 10. i, p. 37.
 Allen, J. A. 1880 A, p. 462.
 Flower, W. H. 1883 D, p. 443.
 1885 A.
 Flower and Lydekker 1891 A, p. 601.
 Gray, J. E. 1866 A, p. 31.
 Huxley, T. H. 1872 A, p. 361.
 Mivart, St. G. 1885 A, p. 486.
 Owen, R. 1866 B, p. 494.
 Pictet, F. J. 1853 A, p. 232.
 Toulou, F. 1897 A.
 Van Beneden, P. J. 1877 A.
 Winge, H. 1895 B, pp. 47, 91.
 Zittel, K. A. 1893 B, p. 684.

Phoca groenlandica.

Allen, J. A. 1880 A, pp. 470, 630. (Synonymy and literature.)
 Dawson, J. W. 1877 B.

Leidy, J. 1856 G, p. 90, pl. iii.
 Leidy, J. 1869 A, p. 415.
 Logan, W. E. 1863 A, p. 920.
 Trouessart, E. L. 1897 A, p. 387. [Phoca (Pagophilus).]
 Recent in Northern Atlantic and in Arctic Ocean around the poles. Pleistocene; Canada, Maine.

Phoca wymani Leidy.

Leidy, J. 1854 A, p. 8.
 Allen, J. A. 1880 A, p. 471.
 Cope, E. D. 1867 B, p. 132, in part.
 1867 C, pp. 151, 152, in part.
 Leidy, J. 1869 A, p. 415, in part.
 Roger, O. 1896 A, p. 74.
 Wyman, J. 1850 B, p. 229, figs. 1-3 (?).
 Miocene; Virginia.
 See citations under *Delphinodon leidy*.

Order PRIMATES.

Blainville, H. M. D. 1864 A, i, A, B, F, pls. i-xi.
 Cope, E. D. 1873 E, pp. 546, 644.
 1880 B, p. 456. (Quadrumanus.)
 Flower, W. H. 1882 B.
 1883 A.
 1883 D, p. 444.
 1885 A.
 Flower and Lydekker 1891 A, p. 680.
 Fry, E. 1846 A.

Gaudry, A. 1878 B, p. 223. ("Les quadrumanes.")
 Gill, T. 1872 A, p. 296.
 1872 B, pp. 1, 47, 50.
 Gill and Coues 1877 A.
 Hay, O. P. 1899 F, p. 682.
 Hubrecht, A. A. W. 1896 A.
 Huxley, T. H. 1872 A, p. 388.
 Lydekker, R. 1885 B.
 1896 B.

- Marsh, O. C. 1872 N. (Quadrumanæ.)
 1872 S. (Quadrumanæ.)
 1877 E.
 Mivart, St. G. 1864 A.
 1865 A.
 1867 A.
 1868 B.
 1873 A.
 1875 A.
 Nicholson and Lydekker 1889 A, p. 1463.
 Osborn, H. F. 1892 I.
 1893 G, p. 493.
 1898 A, p. 146.
 Osborn and Earle 1895 A, p. 15.
 Owen, R. 1835 A.
 1843 A, p. 55. (Quadrumanæ.)
 1845 B, p. 433. (Quadrumanæ.)
 1859 C.
 1866 B, p. 511. (Quadrumanæ.)
 Owen, R. 1868 A, p. 313. (Quadrumanæ.)
 Parsons, F. G. 1899 A.
 1900 A.
 Pauli, S. 1900 B, p. 542.
 Roger, O. 1896 A, p. 249.
 Schlosser, M. 1887 B, p. 7. (Quadrumanæ.)
 1889 A.
 1890 D.
 Scott, W. B. 1892 A, p. 417.
 Slade, D. D. 1891 A.
 1891 B.
 Steinmann and Döderlein 1890 A, p. 741.
 Topinard, P. 1892 A.
 Tornier, G. 1888 A.
 Trouessart, E. L. 1897 A, p. 1.
 Weyhe, —. 1875 A, p. 114.
 Winge, H. 1895 A.
 Zittel, K. A. 1893 B, pp. 685, 747.

Suborder PROSIMIÆ.

- Branco, W. 1897 A, p. 30. ("Halbaffen.")
 Cope, E. D. 1876 E, p. 86. (>Mesodontæ.)
 1877 K, pp. 85, 134. (>Mesodontæ.)
 1880 B, p. 456.
 1882 A, p. 446. (Mesodontæ.)
 1882 E, p. 151.
 1883 I, pp. 77, 79. (Prosimiæ, Mesodontæ.)
 1884 O, pp. 239, 739 (Prosimiæ; pp. 185, 211, 738 (Mesodontæ).
 1884 R, p. 60. (Lemuroidea.)
 1885 K. (Lemuroidea.)
 1888 EE, p. 164. (>Mesodontæ.)
 Flower, W. H. 1876 B, xiv, p. 11. (Lemuroidea.)
 1882 B. (Lemuroidea.)
 Flower and Lydekker 1891 A, p. 682. (Lemuroidea.)
 Gill, T. 1872 A, p. 296.
 Hubrecht, A. A. W. 1896 A, p. 150. (Lemures.)
 Leche, W. 1897 C.
 Lemoine, V. 1880 A, p. 587.
 Lydekker, R. 1896 B. (Lemuroidea.)
 Mivart, St. G. 1868 B.
 Nicholson and Lydekker 1889 A, p. 1465. (Lemuroidea.)
 Osborn, H. F. 1888 F, p. 1068. (Lemuroidea.)
 1890 C, p. 55. (Mesodontæ.)
 1900 C, p. 567. (Mesodontæ.)
 Osborn and Wortman 1892 A, p. 102. (Lemuroidea, Mesodontæ.)
 Roger, O. 1896 A, p. 249.
 Rüttimeyer, L. 1888 A, p. 29. (>Mesodontæ.)
 Schlosser, M. 1887 B, p. 19. (>Pseudolemuridæ.)
 Schmidt, O. 1886 A, p. 294.
 Steinmann and Döderlein 1890 A, p. 742.
 Trouessart, E. L. 1897 A, p. 54.
 Winge, H. 1895 A, p. 12. (Lemuroidei.)
 Zittel, K. A. 1893 B, pp. 686, 711, 725.

MIXODECTIDÆ.

- Cope, E. D. 1883 I, p. 80. (Anaptomorphidæ, Myxodectidæ.)
 1884 K, pp. 318, 319. (Anaptomorphidæ, Myxodectidæ.)
 1884 O, p. 240. (Anaptomorphidæ, Myxodectidæ.)
 1884 R, p. 60. (Anaptomorphidæ, Myxodectidæ.)
 1885 K, pp. 459, 464. (Anaptomorphidæ, Myxodectidæ.)
 Haeckel, E. 1895 A, pp. 600, 604. (Necrolepures, in part.)
 Matthew, W. D. 1899 A, p. 29.
 Osborn and Earle 1895 A, p. 16.
 Osborn and Wortman 1892 A, pp. 101, 102.
 Roger, O. 1896 A, p. 253. (Anaptomorphidæ.)
 Trouessart, E. L. 1897 A, p. 66. (Tarsiidæ, in part.)
 Winge, H. 1895 A, p. 12. (Tarsiidæ, in part; Tarsiinæ.)
 Zittel, K. A. 1893 B, p. 696.

MIXODECTES Cope. Type *M. pungens* Cope.

- Cope, E. D. 1883 M, p. 558.
 Branco, W. 1897 A, p. 31.
 Cope, E. D. 1884 K, p. 319.
 1884 O, pp. xxxv, p. 240.
 1885 K, p. 465.
 Matthew, W. D. 1897 B, pp. 231, 265.
 1897 C, p. 265.
 1898 B, p. 369.
 Nicholson and Lydekker 1889 A, p. 1467.
 Osborn, H. F. 1898 A, p. 145.
 Schlosser, M. 1887 B, pp. 40, 49.
 Zittel, K. A. 1893 B, p. 697.
Mixodectes crassiusculus Cope.
 Cope, E. D. 1883 M, p. 560.
 1884 O, p. 242, pl. xxivf, fig. 2.

- Cope, E. D. 1888 CC, p. 304.
 Matthew, W. D. 1899 A, p. 29.
 Roger, O. 1896 A, p. 254.
 Trouessart, E. L. 1897 A, p. 67.
 Eocene (Torrejon); New Mexico.

Mixodectes pungens Cope.

- Cope, E. D. 1883 M, p. 559.

ANAPTOMORPHUS Cope. Type *A. æmulus* Cope.

- Cope, E. D. 1872 U, p. 554.
 Branco, W. 1897 A, p. 31.
 Cope, E. D. 1873 E, p. 549.
 1877 K, p. 135.
 1882 E, p. 152.
 1882 N, p. 73.
 1884 K, p. 319.
 1884 O, pp. xxxv, 214, 240, 245.
 1884 R, p. 60.
 1885 K, p. 465.
 1888 G, p. 8.
 Filhol, H. 1874 A, p. 1.
 1883 B, p. 3 (Anaptomorphus); p. 15 (Washakius).
 1885 A.
 Flower, W. H. 1882 B, p. 445.
 Flower and Lydekker 1891 A, p. 697.
 Hubrecht, A. A. W. 1896 A, p. 162.
 Leidy, J. 1873 B, p. 123. (Washakius, type *W. insignis*.)
 Nicholson and Lydekker 1889 A, p. 1467.
 Osborn, H. F. 1888 F, p. 1077.
 1892 I.
 1895 C, p. 7, pl. AA, figs. 7, 9.
 Osborn and Wortman 1892 A, p. 102.
 Schlosser, M. 1887 B, p. 34 (Washakius=?Opisthotomus); pp. 39, 48 (Anaptomorphus).
 Science 1885 A, p. 489.
 Scott, W. B. 1892 A, p. 418.
 Steinmann and Döderlein 1890 A, p. 744.
 Trouessart, E. L. 1897 A, p. 67.
 Winge, H. 1895 A, p. 15.
 Zittel, K. A. 1893 B, p. 697.

Anaptomorphus æmulus Cope.

- Cope, E. D. 1872 U, p. 554.

- Cope, E. D. 1884 O, p. 241, pl. xxivf, fig. 1.
 1885 K, p. 465, fig. 9.
 1888 CC, p. 304.
 Matthew, W. D. 1897 C, p. 266, fig. 1.
 1899 A, p. 29.
 Roger, O. 1896 A, p. 254.
 Trouessart, E. L. 1897 A, p. 67.
 Eocene (Torrejon); New Mexico.

- Cope, E. D. 1873 E, p. 549.
 1884 O, p. 248, pl. xxv, fig. 10.
 1885 K, p. 465, fig. 11.
 Marsh, O. C. 1875 B, p. 239. (Syn. of *Antiacodon nanus*.)
 Matthew, W. D. 1899 A, p. 38.
 Nicholson and Lydekker 1889 A, p. 1468, fig. 1351.
 Osborn and Wortman 1892 A, p. 103. (*Antiacodon*.)
 Roger, O. 1896 A, p. 253. (*A. æmulus*, with "Washakius fallax" as a synonym.)
 Trouessart, E. L. 1897 A, p. 67.
 Eocene (Bridger); Wyoming.

Anaptomorphus homunculus Cope.

- Cope, E. D. 1882 E, p. 152.
 1882 N, p. 73.
 1884 K, p. 466, fig. 12.
 1884 O, p. 249, pl. xxive, fig. 1.
 Matthew, W. D. 1899 A, p. 30. (*Omomys*.)
 Nicholson and Lydekker 1889 A, p. 1467, fig. 1350.
 Osborn, H. F. 1895 C, p. 11, fig. D.
 Osborn and Wortman 1892 A, p. 102, fig. 6.
 Roger, O. 1896 A, p. 254.
 Trouessart, E. L. 1897 A, p. 67.
 Zittel, K. A. 1893 B, p. 697, fig. 576.
 Eocene (Wasatch); Wyoming.

Anaptomorphus insignis (Leidy).

- Leidy, J. 1873 B, pp. 123, 336, pl. xxvii, figs. 3, 4. (Washakius.)
 Matthew, W. D. 1899 A, p. 38. (Syn. of *A. æmulus*.)
 Trouessart, E. L. 1897 A, p. 67. (*Anaptomorphus*.)
 Eocene (Bridger); Wyoming.

ANTIACODON Marsh. Type *A. venustus* Marsh.

- Marsh, O. C. 1872 I, p. 210.
 Cope, E. D. 1873 C, pp. 13, 17.
 1875 L, p. 21.
 Filhol, H. 1883 B, p. 17.
 Marsh, O. C. 1875 B, p. 239.
 1877 E.
 Matthew, W. D. 1899 A, p. 38. (=?*Omomys*.)
 Schlosser, M. 1887 B, p. 38.
 Zittel, K. A. 1893 B, p. 697. (Syn. of *Anaptomorphus*.)

Antiacodon nanus Marsh.

- Marsh, O. C. 1872 I, p. 213. (*Hemiacodon*.)
 1875 B, p. 239. (*Antiacodon*; *Anaptomorphus æmulus*, a synonym.)

- Matthew, W. D. 1899 A, p. 38. (*Hemiacodon*? *nanus*.)
 Trouessart, E. L. 1897 A, p. 74. (*Hemiacodon*.)
 Eocene (Bridger); Wyoming.
 Marsh's *Antiacodon nanus* seems to be his earlier *Hemiacodon nanus*.

Antiacodon venustus Marsh.

- Marsh, O. C. 1872 I, p. 210.
 Cope, E. D. 1873 E, p. 607. (Syn. of *A. pygmaeus*.)
 1873 U, p. 1. (Syn. of *A. pygmaeus*.)
 Matthew, W. D. 1899 A, p. 38.
 Roger, O. 1896 A, p. 253. (*Sarcolemur*.)
 Trouessart, E. L. 1897 A, p. 67 (Syn. of *A. æmulus*); p. 73 (*Sarcolemur*.)
 Eocene (Bridger); Wyoming.

OMOMYS Leidy. Type *O. carteri* Leidy.

- Leidy, J.* 1869 B, p. 63.
Cope, E. D. 1875 C, p. 13.
 1877 K, p. 134.
 1884 O, pp. 215, 240.
Leidy, J. 1869 A, p. 408.
 1871 C, p. 364.
Nicholson and Lydekker 1889 A, p. 1467.
Osborn and Wortman 1892 A, p. 102.
Schlosser, M. 1887 B, p. 35.
Zittel, K. A. 1893 B, p. 697.

Omomys carteri Leidy.

- Leidy, J.* 1869 B, p. 63.
 1869 A, p. 408, pl. xxix, figs. 13, 14.
 1871 C, p. 365.
 1872 B, p. 356.
 1873 B, pp. 120, 336.
Matthew, W. D. 1899 A, p. 38.
Roger, O. 1896 A, p. 254.
Trouessart, E. L. 1897 A, p. 67.
 Eocene (Bridger); Wyoming.

CYNODONTOMYS Cope. Type *C. latidens* Cope.

- Cope, E. D.* 1882 E, p. 151.
 1883 M, p. 559.
 1884 K, p. 319.
 1884 O, pp. xxxv, pp. 239, 240, 243.
 1885 K, p. 465.
Nicholson and Lydekker 1889 A, p. 1467.
Schlosser, M. 1887 B, pp. 40, 48.
Zittel, K. A. 1893 B, p. 698.

Cynodontomys latidens Cope.

- Cope, E. D.* 1882 E, p. 151.
 1884 O, p. 244, pl. xxiv, fig. 2.
 1885 K, p. 465, fig. 10.
Matthew, W. D. 1899 A, p. 30.
Roger, O. 1896 A, p. 254.
Trouessart, E. L. 1897 A, p. 68.
 Eocene (Wasatch); Wyoming.

PROSINOPA Trouessart. Type *Sinopa eximia* Leidy.

- Trouessart, E. L.* 1897 A, p. 68.
Scott, W. B. 1892 B, p. 310. (Sinopa.)
Prosinoxa eximia (Leidy).
Leidy, J. 1873 B, pp. 118, 316, pl. xvi, fig. 45. (Sinopa.)

- Matthew, W. D.* 1899 A, p. 38.
Roger, O. 1896 A, pp. 35, 254. (Sinopa?)
Scott, W. B. 1892 B, p. 310. (Sinopa?)
Trouessart, E. L. 1897 A, p. 68.
 Eocene (Bridger); Wyoming.

LIMNOTHERIIDÆ.

- Marsh, O. C.* 1875 B, p. 239.
Bronn, H. G. 1838 A, p. 1224, pl. xlvi, fig. 6. (Adapis.)
Cope, E. D. 1884 K, p. 318.
 1884 O, pp. 213, 240.
 1885 K, p. 459.
 1888 EE, p. 163.
Filhol, H. 1883 B, p. 19. (Adapis.)
Flower, W. H. 1882 B, p. 444. (Adapis.)
Gaudry, A. 1878 B, p. 226. (Adapis.)
Haeckel, E. 1895 A, pp. 600, 604. (Necrolestes, in part.)
Leche, W. 1897 C, p. 147. (Adapis.)

- Marsh, O. C.* 1875 B, p. 240. (Lemuravidae.)
Marsh, O. C. 1876 G, p. 60. (Limnotheriidae, Lemuravidae.)
 1877 E.
 1895 D, p. 498. (Limnotheriidae, Lemuravidae.)
Nicholson and Lydekker 1889 A, p. 1466. (Adapidae, Hyopsodontidae.)
Schlosser, M. 1887 B, p. 21 (Adapidae); pp. 21, 54 (Hyopsodontidae).
Steinmann and Döderlein 1890 A, p. 743. (Adapidae, Hyopsodontidae.)
Zittel, K. A. 1893 B, p. 689. (Pachylemuridae.)

TOMTHERIUM Cope. Type *T. rostratum* Cope.

- Cope, E. D.* 1872 E, p. 470.
 1873 E, pp. 546, 645.
 1876 E.
 1877 K, p. 134.
 1884 O, pp. 216, 218.
 1885 K, pp. 460, 461.
Flower and Lydekker 1891 A, p. 698.
Lockwood, S. 1886 A, p. 324.
Matthew, W. D. 1899 A, p. 37. (Syn. of Notharctus.)
Nicholson and Lydekker 1889 A, p. 1466.
Osborn, Scott, and Speir 1878 A, p. 13.
Schlosser, M. 1887 B, p. 22.
Zittel, K. A. 1893 B, p. 693.

Tomtherium affine (Marsh).

- Marsh, O. C.* 1872 I, p. 207. (Limnotherium.)
Cope, E. D. 1884 O, p. 223. (Limnotherium.)
Marsh, O. C. 1875 B, p. 239. (Limnotherium; T. rostratum, a syn.)
Matthew, W. D. 1899 A, p. 37. (Notharctus.)
Trouessart, E. L. 1897 A, p. 70. (Syn. of T. rostratum.)
 Eocene (Bridger); Wyoming.
 Possibly identical with *T. rostratum* Cope.

Tomtherium rostratum Cope.

- Cope, E. D.* 1872 E, p. 470.

Cope, E. D. 1873 E, p. 548.

1873 U, p. 3.

1876 E.

1884 O, p. 221, pl. xxv, figs. 1-9.

1885 K, p. 464, figs. 5-7.

Marsh, O. C. 1875 B, p. 239. (Syn. of *Limnotherium* affine.)

Matthew, W. D. 1899 A, p. 37. (Syn. of *Notharctus tenebrosus*.)

Osborn, Scott, and Speir 1878 A, p. 13.

Roger, O. 1896 A, p. 251.

Trouessart, E. L. 1897 A, p. 70.

Eocene (Bridger); Wyoming.

LIMNOTHERIUM Marsh. Type *L. tyrannus* Marsh.

Marsh, O. C. 1871 D, p. 43.

Cope, E. D. 1884 O, p. 220.

1887 S, p. 253.

Marsh, O. C. 1872 N.

1875 B, p. 239.

1877 E.

1895 D, p. 498.

Matthew, W. D. 1899 A, p. 37. (Syn. of *Notharctus*.)

Nicholson and Lydekker 1889 A, p. 1372.

Schlosser, M. 1887 B, p. 36. (Syn. of *Tomitherium*.)

Trouessart, E. L. 1897 A, p. 70. (Syn. of *Tomitherium*.)

Zittel, K. A. 1893 B, p. 693. (Syn. of *Tomitherium*.)

Limnotherium tyrannus Marsh.

Marsh, O. C. 1871 D, p. 43.

Cope, E. D. 1872 E, p. 471. (*Notharctus*.)

King, C. 1878 A, p. 403.

Leidy, J. 1872 B, p. 364.

Matthew, W. D. 1899 A, p. 37. (*Notharctus*.)

Roger, O. 1896 A, p. 251. (*Tomitherium*.)

Trouessart, E. L. 1897 A, p. 70. (*Tomitherium*.)

Eocene (Bridger); Wyoming.

NOTHARCTUS Leidy. Type *N. tenebrosus* Leidy.

Leidy, J. 1870 Q, p. 114.

Cope, E. D. 1872 E, p. 471.

1873 E, p. 548.

1877 K, p. 135.

1879 A, p. 43. (Syn. of *Adapis*.)

1884 O, p. 34.

1885 K, p. 460.

Filhol, H. 1883 B, p. 19.

Flower and Lydekker 1891 A, p. 698.

Leidy, J. 1871 C, p. 341.

1873 B, p. 86.

Marsh, O. C. 1875 B, p. 239.

1891 L, p. 263.

Matthew W. D. 1899 A, p. 37.

Nicholson and Lydekker 1889 A, p. 1466.

Schlosser, M. 1887 B, p. 22.

Zittel, K. A. 1893 B, p. 694.

Notharctus tenebrosus Leidy

Leidy, J. 1870 Q, p. 114.

Cope, E. D. 1872 E, p. 471.

1885 K, p. 461, fig. 4.

Leidy, J. 1871 C, p. 344.

1872 B, p. 364.

1873 B, pp. 86, 329, pl. vi, figs. 36, 37.

Matthew, W. D. 1899 A, p. 37.

Roger, O. 1896 A, p. 252.

Trouessart, E. L. 1897 A, p. 70.

Eocene (Bridger); Wyoming.

LEMURAVUS Marsh. Type *L. distans* Marsh.

Marsh, O. C. 1875 B, p. 239.

Cope, E. D. 1877 K, p. 148.

Marsh, O. C. 1876 G, p. 60.

1877 E.

1895 D, p. 498.

Nicholson and Lydekker 1889 A, p. 1468.

Zittel, K. A. 1893 B, p. 691.

Lemuravus distans Marsh.

Marsh, O. C. 1875 B, p. 238.

King, C. 1878 A, p. 403.

Matthew, W. D. 1899 A, p. 37. (Syn. of *Hyopsodus paulus*.)

Roger, O. 1896 A, p. 250.

Trouessart, E. L. 1897 A, p. 70.

Eocene (Bridger); Wyoming.

PELYCODUS Cope. Type *Prototomus jarrovi* Cope.

Cope, E. D. 1875 C, p. 13.

1875 L, p. 21.

1882 E, p. 151.

1884 O, pp. 216, 224.

1885 K, pp. 459, 467.

Flower and Lydekker 1891 A, p. 699.

Nicholson and Lydekker 1889 A, p. 1465.

Osborn, H. F. 1888 A, p. 1076.

Rütimeyer, L. 1888 A, p. 34.

1891 A, p. 115.

Schlosser, M. 1887 B, p. 21.

1894 A, p. 159.

Steinmann and Döderlein 1890 A, p. 743.

Zittel, K. A. 1893 B, p. 691.

Pelycodus frugivorus Cope.

Cope, E. D. 1875 C, p. 14.

1877 K, p. 144, pl. xxxix, fig. 16. (*Tomitherium*.)

1881 D, p. 187. (*P. nunienum*.)

- Cope, E. D. 1882 E, p. 151.
 1884 O, pp. 182, 225, 230, pl. xxva, figs. 4, 5.
 Earle, C. 1898 A, p. 262.
 Matthew, W. D. 1899 A, pp. 30, 34.
 Roger, O. 1896 A, p. 250. (P. frugivorus, P. numie-
 num.)
 Rüttimeyer, L. 1888 A, p. 35.
 Trouessart, E. L. 1897 A, p. 71.
 Zittel, K. A. 1893 B, p. 692, fig. 570.
 Eocene (Wasatch, Wind River); New Mexico,
 Wyoming.

Pelycodus jarrovii Cope.

- Cope, E. D. 1874 O, p. 14. (Prototomus.)
 1875 C, p. 14.
 1876 E, p. 88. (Tomitherium.)
 1877 K, pp. 137, 141, pl. xxxix, figs. 17, 18;
 pl. xl, figs. 1-15. (Tomitherium.)
 1881 D, p. 187.
 1882 E, p. 151.
 1884 O, pp. 225, 228.

- Matthew, W. D. 1899 A, p. 30.
 Roger, O. 1896 A, p. 250.
 Trouessart, E. L. 1897 A, p. 70.
 Eocene (Wasatch); New Mexico, Wyoming.

Pelycodus tutus Cope.

- Cope, E. D. 1877 K, p. 141, pl. xxxix, fig. 19; pl.
 xl, figs. 16-25. (Tomitherium.)
 1876 E, p. 88. (No description.)
 1881 D, p. 187.
 1882 E, p. 151.
 1884 O, pp. 224, 225, 228, pl. xxva, figs. 1-3.
 1885 K, p. 468, figs. 13, 16.
 Matthew, W. D. 1899 A, pp. 30, 34.
 Roger, O. 1896 A, p. 250.
 Rüttimeyer, L. 1888 A, p. 35.
 Trouessart, E. L. 1897 A, p. 71.
 Zittel, K. A. 1893 B, p. 692, fig. 569.
 Eocene (Wasatch, Wind River); New Mexico,
 Wyoming, Colorado.

Hyopsodus Leidy. Type *H. paulus* Leidy.

- Leidy, J. 1870 O, p. 110.
 Cope, E. D. 1875 C, pp. 13, 18.
 1875 L, p. 21.
 1877 K, pp. 135, 150.
 1882 GG, p. 1029. (Diacodexis, type *D. late-*
cuneus.)
 1884 O, pp. 216, 234 (Hyopsodus); pp. 386,
 492 (Diacodexis).
 1885 K, p. 460.
 1885 X, p. 1208.
 1887 S, p. 257.
 Earle, C. 1898 A, p. 262.
 Flower and Lydekker 1891 A, p. 697.
 Gaudry, A. 1877 A.
 Leidy, J. 1871 C, p. 354.
 1872 B, p. 362.
 1872 C, p. 20.
 1873 B, p. 75.
 Lydekker, R. 1885 A.
 Marsh, O. C. 1871 D, p. 42. (Hypsodus.)
 1875 B, p. 239.
 1877 E.
 Nicholson and Lydekker 1889 A, p. 1465.
 Osborn, H. F. 1888 E.
 Osborn, Scott, and Speir 1878 A, p. 15.
 Pavlow, M. 1887 A, p. 369. (Diacodexis.)
 1888 A, p. 135.
 Rüttimeyer, L. 1888 A, p. 34.
 1891 A, p. 118.
 Schlosser, M. 1887 B, p. 21.
 1894 A, p. 159.
 Scott, W. B. 1892 A, p. 418.
 Steinmann and Döderlein 1890 A, p. 743.
 Zittel, K. A. 1893 B, p. 220 (Diacodexis); p. 693
 (Hypsodus).

Hyopsodus gracilis Marsh.

- Marsh, O. C. 1871 D, p. 42. (Hypsodus.)
 Cope, E. D. 1872 E, p. 471. (Notharetus.)
 King, C. 1878 A, p. 407.
 Leidy, J. 1872 B, p. 363.
 1872 C, p. 20.
 Matthew, W. D. 1899 A, pp. 37, 49.
 Roger, O. 1896 A, p. 251.
 Scott, W. B. 1890 A, p. 471.

- Scott and Osborn 1887 A, p. 255.
 Trouessart, E. L. 1897 A, p. 71.
 Eocene (Bridger, Uinta); Wyoming.

Hyopsodus laticuneus (Cope).

- Cope, E. D. 1882 E, pp. 179, 181. (Phenacodus lati-
 cuneus, in part.)
 1882 GG, p. 1029. (Diacodexis.)
 1884 O, p. 492 pl. xxve, figs. 17, molars; p. 18
 (Diacodexis).
 1884 AA, p. 901, figs. 24b, c. (Diacodexis.)
 Matthew, W. D. 1899 A, p. 30.
 Pavlow, M. 1887 A, p. 369. (Diacodexis.)
 Roger, O. 1896 A, p. 167. (Diacodexis?.)
 Trouessart, E. L. 1897 A, p. 726.
 Eocene (Wasatch); Wyoming.
 Dr. Matthew (op. cit.) states that the molars,
 upper and lower, of Cope's *D. laticuneus* belong
 to *Hyopsodus*, the premolars to *Hyracotherium*
index.

Hyopsodus lemoinianus Cope.

- Cope, E. D. 1882 E, p. 148,
 1884 O, pp. 235, 236, pl. xxive, figs. 8, 9.
 Matthew, W. D. 1899 A, pp. 30, 34.
 Roger, O. 1896 A, p. 251.
 Trouessart, E. L. 1897 A, p. 71.
 Eocene (Wasatch, Wind River); Wyoming.

Hyopsodus minusculus Leidy.

- Leidy, J. 1873 B, pp. 81, 320, pl. xxvii, fig. 5.
 Cope, E. D. 1875 C, p. 18. (Syn. of *H. vicarius*.)
 1880 O, p. 908. (Syn. ? of *H. vicarius*.)
 1884 O, p. 237. (Syn. of *H. vicarius*.)
 King, C. 1878 A, p. 403.
 Matthew, W. D. 1899 A, p. 37.
 Roger, O. 1896 A, p. 251.
 Trouessart, E. L. 1897 A, p. 71.
 Eocene (Bridger); Wyoming.
 May be identical with *H. vicarius*.

Hyopsodus miticulus Cope.

- Cope, E. D. 1874 O, p. 8. (Esthonyx.)
 1875 C, p. 18.
 1877 K, p. 150, pl. xlv, figs. 10-12.

Cope, E. D. 1882 E, p. 149.

1884 O, p. 235.

Matthew, W. D. 1899 A, pp. 30, 34.

Roger, O. 1896 A, p. 251.

Trouessart, E. L. 1897 A, p. 71.

Eocene (Wasatch, Wind River); New Mexico.

Hyopsodus paulus Leidy.

Leidy, J. 1870 O, p. 110.

Cope, E. D. 1873 E, p. 609.

1873 U, p. 1.

1875 C, p. 18.

1881 D, p. 186.

1882 E, p. 148.

1884 O, pp. 235, 237.

1885 K, p. 460, fig. 2.

1887 I, p. 657.

King, C. 1878 A, p. 403.

Leidy, J. 1871 C, p. 354.

1872 B, p. 363.

1873 B, pp. 75, 320, pl. vi, figs. 1-9, 18-20.

Marsh, D. C. 1871 D, p. 42. (Hypsodus.)

Matthew, W. D. 1899 A, pp. 30, 34, 37.

Osborn, Scott, and Speir 1878 A, p. 15.

Pavlow, M. 1887 A, p. 371.

Roger, O. 1896 A, p. 251.

Trouessart, E. L. 1897 A, p. 71.

Eocene (Wasatch, Wind River, Bridger);

Wyoming.

Hyopsodus powellianus Cope.

Cope, E. D. 1884 O, p. 235, pl. xxiii d, figs. 3, 4.

1882 E, pp. 179, 180. (Phenacodus zunien-
sis.)

Matthew, W. D. 1897 C, p. 270.

1899 A, p. 30.

Osborn, H. F. 1897 G, p. 256.

Roger, O. 1896 A, p. 251.

Trouessart, E. L. 1897 A, p. 71.

Eocene (Wasatch); Wyoming.

Hyopsodus vicarius Cope.

Cope, E. D. 1873 U, p. 1. (Microsyops.)

1873 E, p. 609. (Microsyops.)

1875 C, p. 18.

1880 O, p. 908.

1881 D, p. 186.

1882 E, p. 149.

1884 O, pp. 235, 237, pl. xxiv, figs. 20, 21; pl.

xxva, fig. 7.

1885 K, p. 460, fig. 2.

Lydekker, R. 1885 E, p. 470.

Matthew, W. D. 1899 A, pp. 30, 34, 37.

Nicholson and Lydekker 1889 A, p. 1465, fig. 1348

Roger, O. 1896 A, p. 251.

Schlosser, M. 1887 B, p. 21.

Trouessart, E. L. 1897 A, p. 71.

Eocene (Wasatch, Wind River, Bridger);

Wyoming.

Microsyops Leidy. Type *M. gracilis* Leidy.

Leidy, J. 1872 C, p. 20.

Cope, E. D. 1875 C, p. 13.

1877 K, p. 134.

1884 K, p. 319.

1884 O, pp. xxxv, 215, 216, 240.

1885 K, p. 465.

Flower and Lydekker 1891 A, p. 698.

Gaudry, A. 1877 A.

Leidy, J. 1873 B, p. 82.

Marsh, O. C. 1875 B, p. 239.

Matthew, W. D. 1897 C, p. 265.

Nicholson and Lydekker 1889 A, p. 1466

Schlosser, M. 1887 B, pp. 40, 49.

Zittel, K. A. 1893 B, p. 693.

Microsyops elegans (Marsh).

Marsh, O. C. 1871 D, p. 43. (Limnotherium.)

Cope, E. D. 1884 O, p. 217.

1887 S, p. 257, fig. 30.

King, C. 1878 A, p. 403.

Leidy, J. 1872 B, p. 364. (Limnotherium.)

1873 B, pp. 83, 320.

Matthew, W. D. 1899 A, p. 37.

Roger, O. 1896 A, p. 251 (syn. of *M. gracilis*); p. 252
(Notharctus).

Trouessart, E. L. 1897 A, p. 72.

Eocene (Bridger); Wyoming.

Microsyops gracilis Leidy.

Leidy, J. 1872 C, p. 20.

Cope, E. D. 1884 O, p. 216.

1885 K, p. 465, fig. 2.

Leidy, J. 1873 B, p. 83, pl. vi, figs. 14-17.

Marsh, O. C. 1881 D, p. 188.

Matthew, W. D. 1899 A, pp. 30, 34, 37.

Roger, O. 1896 A, p. 251.

Eocene (Wasatch, Wind River, Bridger);

Wyoming.

Microsyops scottianus Cope.

Cope, E. D. 1881 D, p. 188.

1884 O, p. 217, pl. xxiva, fig. 2.

Matthew, W. D. 1899 A, p. 34.

Roger, O. 1896 A, p. 251.

Trouessart, E. L. 1897 A, p. 72.

Eocene (Wind River); Wyoming.

Microsyops speirianus Cope.

Cope, E. D. 1880 O, p. 908.

1881 D, p. 188.

1882 C, p. 463. (*M. spierianus*.)

1884 O, p. 216, pl. xxva, fig. 8. (*M. spieri-*
anus.)

Matthew, W. D. 1899 A, p. 30.

Roger, O. 1896 A, p. 251.

Trouessart, E. L. 1897 A, p. 72.

Eocene (Wind River); Wyoming.

Microsyops uintensis Osborn.

Osborn, H. F. 1895 A, p. 77, fig. 1.

Matthew, W. D. 1899 A, p. 49.

Roger, O. 1896 A, p. 251.

Trouessart, E. L. 1897 A, p. 72.

Eocene (Uinta); Wyoming.

MICROSUS Leidy. Type *M. cuspidatus* Leidy.*Leidy, J.* 1870 Q, p. 11.

1871 C, p. 354.

1872 B, p. 363.

1873 B, p. 81.

Trouessart, E. L. 1897 A, p. 72. (Syn. of Microsyps.)

Zittel, K. A. 1893 B, pp. 688, 693.

Microsus cuspidatus Leidy.*Leidy, J.* 1870 Q, p. 113.

1871 C, p. 354.

1872 B, p. 363.

1873 B, pp. 81, 321, pl. vi, figs. 10, 11.

Matthew, W. D. 1899 A, p. 37.

Trouessart, E. L. 1897 A, p. 72. (Syn. of Microsyps gracilis.)

Eocene (Bridger); Wyoming.

MENOTHERIUM Cope. Type *M. lemurinum* Cope.*Cope, E. D.* 1873 R, p. 419.

1874 B, p. 510.

1875 N, p. 256.

1884 O, pp. 788, 808.

Marsh, O. C. 1875 B, p. 240. (Laopithecus, type *L. robustus*.)

1877 E.

Matthew, W. D. 1899 A, p. 59. (Syn. of Leptochærus.)

Scott, W. B. 1890 A, p. 471. (Menotherium, Laopithecus.)

Zittel, K. A. 1893 B, p. 696.

Menotherium lemurinum Cope.*Cope, E. D.* 1873 R, p. 419.

1874 B, p. 510.

1874 P, p. 22.

Cope, E. D. 1884 O, p. 808, pl. lxvi, figs. 34-36.

Matthew, W. D. 1899 A, p. 60. (Leptochærus.)

Trouessart, E. L. 1897 A, p. 72.

Oligocene (White River); Colorado.

Menotherium robustum (Marsh).*Marsh, O. C.* 1875 B, p. 240. (Laopithecus.)

King, C. 1878 A, p. 411. (Laopithecus.)

Marsh, O. C. 1893 D, p. 412, pl. x, fig. 5. (Laopithecus.)

Matthew, W. D. 1889 A, p. 59. (Syn. of Leptochærus spectabilis.)

Roger, O. 1896 A, p. 252. (Laopithecus.)

Trouessart, E. L. 1897 A, p. 72. (Syn. of *M. lemurinum*.)

Oligocene (White River); 30 miles south of Black Hills, South Dakota.

INDRODON Cope. Type *I. malaris* Cope.*Cope, E. D.* 1884 K, pp. 318, 319.

1884 O, p. xxxv.

1884 R, p. 60.

1885 K, p. 465.

Flower and Lydekker 1891 A, p. 699.

Matthew, W. D. 1897 C, p. 265.

Osborn and Earle 1895 A, p. 16.

Zittel, K. A. 1893 B, p. 696.

Indrodon malaris Cope.*Cope, E. D.* 1884 K, p. 318.*Cope, E. D.* 1884 R, p. 61.

1885 K, p. 465.

1888 CC, p. 304.

Matthew, W. D. 1897 C, p. 320.

1899 A, p. 29.

Osborn and Earle 1895 A, p. 16, figs. 3-5.

Roger, O. 1896 A, p. 252.

Trouessart, E. L. 1897 A, p. 72.

Eocene (Torrejon); New Mexico.

OPISTHOTOMUS Cope. Type *O. astutus* Cope.*Cope, E. D.* 1875 C, pp. 13, 15.

1877 K, pp. 135, 151.

1884 O, p. 216.

1885 K, p. 460.

Osborn, Scott, and Speir 1878 A, p. 17.

Schlosser, M. 1887 B, p. 34. (—?Washakius.)

Zittel, K. A. 1893 B, p. 696.

Opisthotomus astutus Cope.*Cope, E. D.* 1875 C, p. 16.

1877 K, p. 152, pl. xlv, fig. 9.

Osborn, Scott, and Speir 1878 A, p. 17.

Roger, O. 1896 A, p. 252.

Trouessart, E. L. 1897 A, p. 73.

Eocene; New Mexico, Wyoming.

Opisthotomus flagrans Cope.*Cope, E. D.* 1875 C, p. 16.

1877 K, p. 152, pl. xlv, fig. 8.

Roger, O. 1896 A, p. 252.

Trouessart, E. L. 1897 A, p. 73.

Eocene; New Mexico.

APHELISCUS Cope. Type *A. insidiosus* Cope.*Cope, E. D.* 1875 C, pp. 13, 16.

1877 K, pp. 135, 137.

1884 O, p. 216.

1885 K, p. 460.

Zittel, K. A. 1893 B, p. 696.

Apheliscus insidiosus Cope.*Cope, E. D.* 1874 O, p. 14. (Prototomus.)*Cope, E. D.* 1875 C, p. 17.

1877 K, p. 147.

1885 K, p. 460.

Roger, O. 1896 A, p. 253.

Trouessart, E. L. 1897 A, p. 73.

Eocene; New Mexico.

SARCOLEMUR Cope. Type *Antiacodon furcatus* Cope.

Cope, E. D. 1875 N, p. 256.

1877 K, pp. 134, 147.

1884 O, pp. 216, 233.

1885 K, p. 460.

Trouessart, E. L. 1898 A, p. 73.

Zittel, K. A. 1893 B, p. 73.

Sarcolemur crassus Cope.

Cope, E. D. 1875 C, p. 17. (*Antiacodon*.)

1877 K, p. 149, pl. xlv, fig. 16.

Roger, O. 1896 A, p. 253.

Trouessart, E. L. 1897 A, p. 73.

Eocene (Wasatch); New Mexico.

Sarcolemur mentalis Cope.

Cope, E. D. 1875 C, p. 17. (*Antiacodon*.)

1875 N, p. 256.

1877 K, p. 149, pl. xlv, fig. 15.

Roger, O. 1896 A, p. 253.

Trouessart, E. L. 1897 A, p. 73.

Eocene (Wasatch); New Mexico.

Sarcolemur pygmæus Cope.

Cope, E. D. 1872 M, p. 2 of Palæont. Bull. (*Lophiotherium*.)

1872 M (1873), p. 461. (*Hyopsodus*.)

1873 E, p. 607 (*Antiacodon pygmæus*); p. 608 (*A. furcatus*).

1873 U, p. 1. (*Antiacodon pygmæus*, *Antiacodon furcatus*.)

1875 N, p. 256. (*S. furcatus*, *S. pygmæus*.)

1877 K, p. 148. (*S. pygmæus*, *S. furcatus*.)

1884 O, p. 233, pl. xxiv, figs. 18, 19.

Matthew, W. D. 1899 A, p. 38.

Roger, O. 1896 A, p. 253.

Trouessart, E. L. 1897 A, p. 73.

Eocene (Bridger); Wyoming.

HIPPOSYUS Leidy. Type *H. formosus* Leidy.

Leidy, J. 1872 D, p. 37.

Cope, E. D. 1874 M, p. 82.

1887 S, p. 258.

Leidy, J. 1873 B, p. 90.

Marsh, O. C. 1875 B, p. 239.

1877 E.

Schlosser, M. 1887 B, p. 36.

Zittel, K. A. 1893 B, p. 696.

Hipposyus formosus Leidy.

Leidy, J. 1872 D, p. 37.

1873 B, pp. 90, 321, pl. vi, fig. 41; pl. xxvii, figs. 1, 2.

Matthew, W. D. 1899 A, p. 37.

Roger, O. 1896 A, p. 253.

Trouessart, E. L. 1897 A, p. 73.

Eocene (Bridger); Wyoming.

Hipposyus robustior Leidy.

Leidy, J. 1872 B, p. 364. (*Notharectus*.)

Cope, E. D. 1872 E, p. 471. (*Notharectus*.)

Leidy, J. 1873 B, pp. 93, 321, pl. vi, fig. 40.

Matthew, W. D. 1899 A, p. 37.

Roger, O. 1896 A, p. 253.

Trouessart, E. L. 1897 A, p. 74.

Eocene (Bridger); Wyoming.

BATHRODON Marsh. Type *B. typus* Marsh.

Marsh, O. C. 1872 I, p. 211.

Cope, E. D. 1882 E, p. 165.

Marsh, O. C. 1875 B, p. 238.

1877 A, p. 81.

1877 E.

Schlosser, M. 1887 B, p. 37.

Zittel, K. A. 1893 B, p. 696.

Bathrodon annectens Marsh.

Marsh, O. C. 1872 I, p. 211.

Matthew, W. D. 1899 A, p. 37.

Roger, O. 1896 A, p. 253.

Trouessart, E. L. 1897 A, p. 74.

Eocene (Bridger); Wyoming.

Bathrodon typus Marsh.

Marsh, O. C. 1872 I, p. 211.

Matthew, W. D. 1899 A, p. 37.

Roger, O. 1896 A, p. 253.

Trouessart, E. L. 1897 A, p. 74.

Eocene (Bridger); Wyoming.

TELMALESTES Marsh. Type *T. crassus* Marsh.

Marsh, O. C. 1872 I, p. 206.

Cope, E. D. 1877 K, p. 148. (*Telmatolestes*.)

Marsh, O. C. 1872 N, p. 405. (*Telmatolestes*.)

1875 B, p. 239. (*Telmatolestes*.)

1877 E. (*Telmatolestes*.)

Nicholson and Lydekker 1889 A, p. 1466. (*Telmatolestes*.)

Schlosser, M. 1887 B, p. 37. (*Telmatolestes*.)

Trouessart, E. L. 1897 A, p. 74. (*Telmatolestes*.)

Zittel, K. A. 1893 B, p. 696. (*Telmatolestes*.)

Telmalestes crassus Marsh.

Marsh, O. C. 1872 I, p. 206.

Matthew, W. D. 1899 A, p. 37.

Roger, O. 1896 A, p. 253. (*Telmatolestes*.)

Schlosser, M. 1887 B, p. 37.

Trouessart, E. L. 1897 A, p. 74.

Eocene (Bridger); Wyoming.

HEMIACODON Marsh. Type *H. gracilis* Marsh.*Marsh, O. C.* 1872 I, p. 212.

1877 E.

Schlosser, M. 1887 B, p. 37.

Zittel, K. A. 1893 B, p. 688.

Hemicodon gracilis Marsh.*Marsh, O. C.* 1872 I, p. 212.

Roger, O. 1896 A, p. 253.

Trouessart, E. L. 1897 A, p. 74.

Eocene (Bridger); Wyoming.

Hemicodon pucillus Marsh.*Marsh, O. C.* 1872 I, p. 213.

Matthew, W. D. 1899 A, p. 38.

Roger, O. 1896 A, p. 253. (*H. pusillus*.)Trouessart, E. L. 1897 A, p. 74. (*H. pusillus*.)

Eocene (Bridger); Wyoming.

THINOLESTES Marsh. Type *T. anceps* Marsh.*Marsh, O. C.* 1872 I, p. 205.

1872 N.

1875 B, p. 239.

1877 E.

Nicholson and Lydekker 1889 A, p. 1466

Schlosser, M. 1887 B, p. 37.

Zittel, K. A. 1893 B, p. 696.

Thinolestes anceps Marsh.*Marsh, O. C.* 1872 I, p. 205.

Matthew, W. D. 1899 A, p. 37.

Roger, O. 1896 A, p. 253.

Trouessart, E. L. 1897 A, p. 74.

Eocene (Bridger); Wyoming.

STENACODON Marsh. Type *S. rarus* Marsh.*Marsh, O. C.* 1872 I, p. 210.

Schlosser, M. 1887 B, p. 37.

Zittel, K. A. 1893 B, p. 696.

Stenacodon rarus Marsh.*Marsh, O. C.* 1872 I, p. 210.*Marsh, O. C.* 1894 L, p. 265.

Matthew, W. D. 1899 A, p. 48.

Roger, O. 1896 A, p. 253.

Trouessart, E. L. 1897 A, p. 74.

Eocene (Bridger); Wyoming.

MESACODON Marsh. Type *M. speciosus* Marsh.*Marsh, O. C.* 1872 I, p. 212.

1875 B, p. 239.

1877 E.

Schlosser, M. 1887 B, p. 37.

1890 B, p. 64.

Zittel, K. A. 1893 B, p. 696.

Mesacodon speciosus Marsh.*Marsh, O. C.* 1872 I, p. 212.

Matthew, W. D. 1899 A, p. 38.

Roger, O. 1896 A, p. 253.

Trouessart, E. L. 1897 A, p. 74.

Eocene (Bridger); Wyoming.

PALÆACODON Leidy. Type *P. verus* Leidy.*Leidy, J.* 1872 C, p. 21.

1873 B, p. 122,

Marsh, O. C. 1872 I, p. 224.

1875 B, p. 239.

1877 E.

Schlosser, M. 1887 B, pp. 35, 144.

Zittel, K. A. 1893 B, p. 688.

Palæacodon vagus Marsh.*Marsh, O. C.* 1872 I, p. 224.

King, C. 1878 A, p. 403.

Matthew, W. D. 1899 A, p. 38.

Roger, O. 1896 A, p. 253.

Trouessart, E. L. 1897 A, p. 74.

Eocene (Bridger); Wyoming.

Palæacodon verus Leidy.*Leidy, J.* 1872 C, p. 21.

King, C. 1878 A, p. 403.

Leidy, J. 1872 B, p. 356.

1873 B, pp. 122, 336, pl. vi, fig. 46.

Marsh, O. C. 1872 I, p. 224.

Matthew, W. D. 1899 A, p. 38.

Roger, O. 1896 A, p. 253.

Trouessart, E. L. 1897 A, p. 74.

Eocene (Bridger); Wyoming.

ADDENDA ET CORRIGENDA.

- Page 131, second column, line 15. For "Lazier," read "Laizer."
- Page 230. Under Trouessart, E. L., 1897 A, instead of "pp. 665-1264," read "pp. 1-664." Wherever after page 716 of the present Bibliography and Catalogue Trouessart, E. L., 1898 A, is quoted, "1897" must be substituted for "1898."
- Page 274. For "*EUSELACHII*," read "*ARISTOSELACHII*." *Euselachii* has recently been employed by Parker and Haswell in a different sense.
- Page 304. Under *Otodus divaricatus* insert "Leidy, J." before "1873 B," etc.
- Page 361. Above "Osteolepidæ" insert the following: *Spermatodus pustulosus* Cope. Cope, E. D. 1894 F, p. 438, text fig. 4, Permian, Texas. Both genus and species are new.
- Page 387. Under *Empo nepaholica*, after "Stewart, A. 1900 A. p. 332," insert "pl. lix, figs. 1-9; pl. lxi figs. 2-5."
- Page 393. Under the genus *Anogmus* insert "Cope, E. D., 1877 G, p. 584."
- Page 399. Under *Syllæmus latifrons*, after "1877 K. p. 27," insert "pl. xxiii, fig. 1."
- Page 442. Under *Lytoloma platyops*, after "Cope, E. D., 1869 M, p. 149," insert "pl. vi."
- Page 548. Under *Palæosauropus primævus*, instead of "Silliman, B," read "Amer. Jour. Science."
- Page 620. *Hipparion minimum* was originally described as *Anchitherium minimum*, and ought to have been arranged under *Anchitherium*.
- Page 659. As type of *Tayassu* substitute "*T. pecari* Fischer."

795

Correction made

11/27/07

RfM.

INDEX.

[In this index the numbers printed in roman indicate pages on which names occur that are adopted and are used in the headings; numbers printed in *italic* are those of pages on which names are used as synonyms or are referred to incidentally.]

A.		Page
abbreviatus (Mioplosus).....	404	acinaces (Dittodus)..... 266
abbreviatus (Oracanthus).....	332	acinaciformis (Physonemus)..... 333
aberrans (Achænodon).....	654	acinaciformis (Xystracanthus)..... 333
aberrans (Parahyus).....	654	Acipenser..... 371
abnormus (Sauroidichnites).....	553	Acipenseridæ..... 371
abnormus (Typopus).....	553	Acipenserini..... 371
abradens (Zapsalis).....	190	Acipenseroides..... 365
abrasus (Mesodon).....	372	Aciprion..... 477
abrasus (Typodus).....	471	acolytus (Hyopsodus)..... 606
abruptus (Holosaurus).....	753	acolytus (Mioclenus)..... 606
absarokæ (Deltatherium).....	753	Acondylacanthus..... 328, 329
absarokæ (Didelphodus).....	753	acre (Titanotherium)..... 633, 637
acadianum (Dendroperon).....	418	Aerodobatis..... 310
acadianus (Eosaurus).....	421	Aerodontidæ..... 298
acadica (Cyathaspis).....	340	Aerodus..... 299
acadica (Diplaspis).....	340	Acrolepis..... 369
acadica (Phlyctænaspis).....	345	Actemys..... 449
acadica (Pteraspis).....	340	Actinistia..... 363
acadicus (Cocosteus).....	345	Actinochiri..... 378
acadicus (Phlyctænius).....	345	Actinophorus..... 368
Acanthaspis.....	332	Actinopteri..... 364
acanthicus (Ichthyodectes).....	384, 385	Actinopterygia..... 364
Acanthodes.....	273	Actinospondyli..... 301
Acanthodide.....	273	aculeata (Sinopa)..... 752
Acanthodii.....	273	aculeata (Styptobasis)..... 272
Acanthodini.....	273	aculeatus (Gasterosteus)..... 397
Acanthoesside.....	273	aculeatus (Stypolophus)..... 752
Acanthoëssus.....	273	aculeatus (Triacodon)..... 752
Acantholepis.....	332	acuminata (Lamna)..... 304, 306
Accipitres.....	535	acuminatus (Bacanthion)..... 480
Accipitrine.....	535	acuminatus (Chadodus)..... 267
Acenrophorus.....	374	acuminatus (Ctenopterygius)..... 282
acer (Crocodylus).....	512	acuminatus (Pristodus)..... 282
acer (Crocodylus).....	512	acuminatus (Zamenis)..... 480
acer (Esthonyx).....	715	acus (Cœlorhynchus)..... 331
acer (Megaceratops).....	637	acuta (Daulia)..... 529
acer (Symborodon).....	637	acuta (Ostinaspis)..... 297
Aceratherina.....	645	acutidens (Carcharodon)..... 507
Aceratherium.....	640, 641, 643, 645, 646, 647	acutidens (Champsodelphis)..... 590
Achænodon.....	654	acutidens (Esthonyx)..... 715
Achænodontinæ.....	653	acutidens (Holcodon)..... 440, 466, 469, 516
Acheloma.....	123	acutidens (Mosasaurus)..... 466
Acherontemys.....	146	acutidens (Priscodelphinus)..... 590
acieulata (Sphagepœa).....	325	acutidens (Xiphotrygon)..... 319
aciedentatum (Smilrpeton).....	413	acutum (Aceratherium)..... 647
aciedentatus (Hylonomus).....	413	acutus (Cheirodus)..... 369
acinaces (Diplodus).....	266	acutus (Chirodus)..... 369
acinaces (Dissodus).....	266	acutus (Ctenacanthus)..... 327
		acutus (Dapedoglossus)..... 393

	Page.		Page.
acutus (Petrodus)	297	affinis (Lophiodon)	633
acutus (Pharcodon)	393	affinis (Loxolophodon)	704
acutus (Phareodus)	393	affinis (Merycoidodon)	665
acutus (Turseodus)	369	affinis (Mesacanthus)	273
adamsanus (Sillimanius)	551, 552	affinis (Oreodon)	665
Adapidae	788	affinis (Petalodus)	280
adapinus (Loxolophus)	745	affinis (Scolecephagus)	537
Adapis	788, 789	affinis (Stegosaurus)	496
Adelonycteris	742	affinis (Telmatornis)	528
Adjidauno	720	affinis (T'ria)	524
Adocidae	444	Agabelus	593
Adocus	431, 444, 445	Agamidae	474
aduncus (Galeocerdo)	311	Aganodus	265
aduncus (Galeus)	311	aganus (Clastes)	377
aduncus (Pariotichus)	428	aganus (Lepisosteus)	377
advenum (Diceratherium)	641	agapetillum (Tricium)	735
advenus (Aminodon)	641	agapetillus (Anisonchus)	602
advenus (Baptornis)	522	agapetillus (Oxyacodon)	602
advenus (Orthocynodon)	641	agapetillus (Palaeolagus)	735
Æchmophorus	524	Agassichthys	349
Ælurodon	767, 773, 774	agassizianus (Campodus)	297
Æluroidea	777	agassizi (Pristis)	316
Ælurotherium	778	agassizi (Semonotus)	375
æmulus (Anaptomorphus)	787	agassizii (Ischypterus)	375
æmulus (Antiacodon)	787	agassizii (Palæoniscus)	375
æqualipes (Plestornis)	550	agassizii (Titanichthys)	348
æquicostatus (Acondylacanthus)	329	Agassizodus	296
æquifacies (Tichosteus)	493	Agathauimidae	498
æquipinnis (Dapedoglossus)	393	Agathaumas	498, 499, 500, 502
æquipinnis (Phareodus)	393	agile (Hyracotherium)	611
æsope (Hydrochaerus)	734	agilis (Adocus)	444
æsope (Oronys)	734	agilis (Allosaurus)	489
Æthoespondyli	374	agilis (Boavus)	479
Actosauridae	511	agilis (Cimolodon)	559
Æthyopus	541, 550	agilis (Cimolomys)	559
Ætobatide	319	agilis (Claosaurus)	502
Ætobatis	321	agilis (Caelurus)	493
Ætobatis	321	agilis (Cosoryx)	633
Ætobatus	321	agilis (Dromopus)	543
Ætomorphæ	535	agilis (Eobatrachus)	425
Ætosauria	511	agilis (Epihippus)	611
Ætosauridae	511	agilis (Graculavus)	519
affine (Anchitherium)	615	agilis (Hadrosaurus)	502
affine (Hipparion)	619	agilis (Ichthyornis)	519
affine (Hippotherium)	619	agilis (Leptichthys)	392
affine (Limnotherium)	789	agilis (Limnocyon)	752
affine (Tinoceras)	704	agilis (Merycodus)	683
affine (Tomitherium)	788	agilis (Miakis)	752
affinis (Acanthodes)	273	agilis (Morosaurus)	483
affinis (Acanthoësus)	273	agilis (Nanosaurus)	505
affinis (Baëna)	437	agilis (Orohippus)	611
affinis (Balæna)	601	agilis (Sinopa)	752
affinis (Barosaurus)	485	agilis (Thespesius)	502
affinis (Cataractes)	524	agilis (Thinosaurus)	476
affinis (Chomatodus)	280	agilis (Stypolophus)	752
affinis (Clidastes)	468	Agnomius	593
affinis (Corax)	309	Agomphus	444
affinis (Crocodilus)	512	Agorophius	589
affinis (Crocodylus)	512	Agouti	734
affinis (Deltodopsis)	291	agarius (Hyrachyus)	638
affinis (Ennacodon)	568	agreste (Anchitherium)	613
affinis (Enneodon)	568	agreste (Dinoceras)	702
affinis (Hypohippus)	615	agrestis (Colonoceras)	639
affinis (Hyrachyus)	638	agrestis (Hyrachyus)	638
affinis (Lisgodus)	281	agrestis (Mesohippus)	613
affinis (Lomvia)	574	agrestis (Miohippus)	613

	Page.		Page.
Agriocheridae	662	alternatus (Cladodus)	268
Agriocherinae	662	alticeps (Tinoceras)	702
Agriochærus	662, 663, 664, 665	alticeps (Uintatherium)	702
Agriomeryx	663, 664	alticornis (Bison)	500
Agriotherium	664	alticornis (Ceratops)	500
aguti (Ectocynodon)	428	alticornis (Polynax)	500
aguti (Pariotichus)	428	alticuspis (Diacodon)	740
Aistopoda	410, 411	altidens (Centetodon)	740
Aix	529	altidens (Didymictis)	754
ajax (Apatosaurus)	485	altidens (Viverravus)	754
alaskensis (Bison)	689	altigenis (Temnocyon)	773
alatus (Deltodus)	292	altior (Ptychodus)	318
alatus (Empedias)	427	altirostre (Titanotherium)	637
alatus (Empedocles)	427	altirostris (Symborodon)	635, 637
alatus (Ischypterus)	375	altonensis (Physonemus)	333
alatus (Semionotus)	375	altonensis (Stethacanthus)	333
alberti (Pakelonicus)	367	altus (Amphicelias)	486
alberti (Rhadinichthys)	367	altus (Coniornis)	522
albifrons (Anser)	530	altus (Diplomystus)	391
Albulidae	390	altus (Dryosaurus)	501
Alburnops	395, 396	altus (Laosaurus)	501
Alea	544	altus (Meleagris)	534
Alee	685	altus (Pleurocelus)	483
Alces	685	altus (Procamelus)	677
alces (Cervus)	685	altus (Syntegmodus)	390
Alcidae	524	alveolatum (Ctenerpeton)	415
Alcina	524	Amacanthus	329
Alcoidea	524	amarorum (Triplopus)	640
Alcoidea	524	Ambloctonidae	755
Alectorides	536	Ambloctonus	756
Alectornithes	533	amblodon (Pristis)	316
Alectoromorphæ	533	Ambloxyx	544
Alectoropodes	533	Amblotherium	569
alemanii (Platygonus)	661	Amblyctonidae	755
Aletornis	527	Amblyctonus	756
allabatus (Hadrianus)	450	Amblydactyla	692
Allacodon	557	Amblyodon	416
alleganensis (Dipterus)	352	Amblypoda	692, 701
allegghaniensis (Petalodus)	278	Amblypterus	365, 368
allegghaniensis (Rhinoceroideus)	647	Amblypus	538
alleni (Bison)	688	amblyxiphus (Ctenacanthus)	327
alleni (Gyracanthus)	335	Ameiurus	382
alleni (Orodus)	295	americana (Elephas)	714
Alligator	512, 513, 514	americana (Anas)	529
Alligatoridae	511	americana (Antilocapra)	686
Allodon	557	americana (Fulica)	528
Allodontidae	557	americana (Mareca)	529
Allolopidodus	316	americana (Martes)	767
Allomyidae	718	americana (Mustela)	767
Allomyini	718	americana (Palaspis)	340
Allomys	718	americana (Proviverra)	753
Allops	633, 634	americana (Sus)	690
Allopus	538	americana (Taxidea)	765
Allosauridae	487	americanum (Eotherium)	636
Allosaurus	489, 490	americanum (Hyotherium)	656
Allotheria	556	americanum (Mammut)	708
Alopecias	305	americanum (Megatherium)	576
alta (Clupea)	391	americanum (Titanotherium)	636
altarcus (Anchybopsis)	395	americanus (Alce)	685
altarcus (Leucus)	395	americanus (Alces)	685
altarcus (Rutilus)	395	americanus (Allolepidotus)	376
altarkansanus (Brachyrophus)	506	americanus (Ancodon)	652
alternans (Didelphis)	571	americanus (Ancodus)	653
alternans (Didelphys)	571	americanus (Bison)	689
alternans (Embassia)	571	americanus (Bos)	688, 689
alternans (Peratherium)	571	americanus (Bothrolabis)	656

	Page.		Page.
americanus (Camelus)	680	amplus (Camptonotus)	501
americanus (Castor)	721	amplus (Camptosaurus)	501
americanus (Ceratodus)	356	amplus (Deinodon)	488
americanus (Cervales)	685	amplus (Diploclonus)	633
americanus (Cervus)	685	amplus (Megacerops)	633
americanus (Chæropotamus)	652	amplus (Polyrhizodus)	282
americanus (Elaphus)	685	Amynodon	641
americanus (Elephas)	708, 713	Amynodontidæ	641
americanus (Equus)	622, 623	Amynodontinæ	641
americanus (Eriptychius)	359	Amyzon	395
americanus (Harlanus)	689	Anacalitacanthus	328
americanus (Holoptychius)	344, 358, 359	Anacodon	747
americanus (Hyopotamus)	652	anaides (Ichthyodectes)	384
americanus (Manatus)	584	analis (Diplomystus)	391
americanus (Mastodon)	708	Anaptogenia	728
americanus (Menodus)	634, 636	Anaptogenia	728
americanus (Neoplagiulax)	559	Anaptomorphidæ	786
americanus (Otolithus)	408	Anaptomorphus	787
americanus (Palæomeryx)	682	Anas	529
americanus (Pholidophorus)	383	Anatidæ	529
americanus (Rhinoceros)	636	Anatinæ	529
americanus (Sus)	689	Anatoidæ	529
americanus (Ursus)	628	Anatoidæ	529
Amia	380	anax (Clastes)	377
Amiacei	378	anax (Coryphodon)	698, 699
amierodus (Enchodus)	388	anceps (Anchitherium)	614
Amiidæ	380	anceps (Canis)	775
Amioidei	373	anceps (Cimolichthys)	389
Amiopsis	380	anceps (Drepanacanthus)	334
Amiurus	382	anceps (Enchodus)	389
Ammodon	656	anceps (Glyptosaurus)	475
Ammosaurus	491	anceps (Graculavus)	519
amorphus (Bryactinus)	325	anceps (Ichthyornis)	519
Amphibamus	411	anceps (Mastodon)	704
Amphibia	409	anceps (Megalichthys)	360
Amphicentrum	369	anceps (Miohippus)	613
Amphichelydia	436	anceps (Oracodon)	561
Amphicelias	493	anceps (Phasganodus)	389
Amphiceliidæ	484	anceps (Physonemus)	334
Amphicotylus	516	anceps (Rhizodus)	360
Amphicyon	771, 772, 774	anceps (Thinolestes)	794
Amphienys	445	anceps (Tinoceras)	704
Amphilestes	566	anceps (Titanotherium)	704
Amphilestidæ	566	anceps (Uintatherium)	704
Amphilestinæ	566	anceps (Xystacanthus)	334
Amphimorphe	531	Anchippodontia	715
Amphiplaga	403	Anchippodontidæ	716
Amphisuridae	491	Archippodus	716
Amphisaurus	491	Anchippus	613, 615
Amphisbænæ	476	Anchisauridæ	491
Amphisbænia	476	Anchisaurus	491
Amphisbænidæ	476	Anchisodon	640
Amphisbænoidæ	476	Anchitheriidæ	608
Amphitheriidæ	568, 569	Anchitherium	612, 613, 614, 615, 617, 795
Amphitherium	565	Anchybopsis	395
amphithorax (Testudo)	451	Ancistrodon	408
amphiuminis (Oæstocephalus)	414	Ancodon	652, 653
Amphoroosteus	465	Ancodontidæ	651
amplexus (Epanterias)	183	Ancodus	652, 653
amplidens (Arctotherium)	763	Ancylopoda	690
amplidens (Ursus)	763	Ancyropus	538
amplum (Titanotherium)	633	anemophilus (Pipistrellus)	742
amplus (Aublysodon)	488	anemophilus (Vesperugo)	742
amplus (Brontosaurus)	485	Anguidæ	474
amplus (Camptomus)	562	anguilliformis (Catopterus)	370
		anguilliformis (Redfieldius)	370

	Page.		Page.
anguillulata (Terrapene).....	449	annectens (Aceratherium).....	644
anguillulata (Toxaspis).....	449	annectens (Bathrodon).....	793
anguinea (Helcura).....	545	annectens (Champsosaurus).....	460
angularis (Chomatodus).....	276	annectens (Claosaurus).....	502
angularis (Deltodus).....	289	annectens (Corvus).....	537
angularis (Orthopleurodes).....	289	annectens (Diceratherium).....	644
angularis (Petalodus).....	176	annectens (Isctolophus).....	627
angularis (Psammodus).....	284	annectens (Loxolophodon).....	704
angularis (Tanaodus).....	276	annectens (Mesohippus).....	613
angulata (Erisichthe).....	379	annectens (Miohippus).....	613
angulata (Protosphyræna).....	379	annectens (Rhinoceros).....	644
angulatum (Tomitherium).....	744	annectens (Tinoceras).....	704
angulatus (Calamagras).....	480	annulatum (Thinotherium).....	661
angulatus (Chomatodus).....	276	Anogmius.....	393, 795
angulatus (Chriacus).....	744	Anolide.....	474
angulatus (Cladodus).....	268, 269	anomalous (Palamopus).....	548
angulatus (Ctenacanthus).....	327	Anomodon.....	741
angulatus (Helodus).....	286	Anomodontia.....	426, 430
angulatus (Ogmophis).....	480	Anomcepus.....	539, 550
angulatus (Pelycodus).....	744	anonymus (Ptychodus).....	317
angulatus (Portheus).....	379	Anoplonassa.....	597
angulatus (Tanaodus).....	276	Anosteira.....	447
anguliferus (Conchiopsis).....	364	Anosteiridæ.....	446
anguliferus (Sironectes).....	468	Anosteirine.....	446
angusta (Felis).....	782	Anostira.....	447, 452, 453
angusta (Lytoloma).....	441, 442	Anser.....	530
angusta (Plectropterna).....	549	Anseres.....	528, 529
angustarca (Ciliola).....	396	Anseriformes.....	528
angustarcus (Alburnops).....	396	anthracina (Peplorhina).....	364
angustarcus (Notropis).....	396	Anthracopus.....	539
angusticeps (Captorhinus).....	429	Anthracosauride.....	421
angustidens (Amphicyon).....	772	Anthracosaurus.....	421
angustidens (Carcharias).....	307	Anthracotheria.....	651
angustidens (Carcharodon).....	307	Anthracotheriide.....	651
angustidens (Daphænus).....	772	Anthracotheriine.....	651
angustidens (Entomacodon).....	741	Anthracotherioides.....	651
angustidens (Eohippus).....	609	Anthracotherium.....	651, 652
angustidens (Hyracotherium).....	609	Antiacodon.....	787, 793
angustidens (Mastodon).....	710, 711	Antiarcha.....	342
angustidens (Orohippus).....	609	Anticheiropus.....	539
angustidens (Procamelus).....	677	Antilocapra.....	686
angustidens (Tetrabelodon).....	711	Antilocapridæ.....	686
angustigenis (Haplacodon).....	633	Antilopina.....	687
angustigenis (Megacerops).....	633	Antilopina.....	687
angustigenis (Menodus).....	633	antilopinus (Blastomeryx).....	682
angustigenis (Titanotherium).....	633	Antipus.....	540
angustus (Chomatodus).....	280	antiqua (Hyporhina).....	177
angustus (Ctenacanthus).....	327	antiqua (Ischyrrhiza).....	398
angustus (Ctenodus).....	354	antiqua (Lomvia).....	524
angustus (Deltodopsis).....	291	antiqua (Thecachampsæ).....	512
angustus (Deltodus).....	291	antiqua (Uria).....	524
angustus (Felis).....	782	antiquior (Batrachoides).....	541
angustus (Haploconus).....	604	antiquior (Palæosauropus).....	548
angustus (Megalichthys).....	360	antiquior (Sauropus).....	548
angustus (Miocænus).....	694	antiquum (Ischyrotherium).....	461
angustus (Rhizodus).....	360	antiquum (Palæoniscum).....	368
angustus (Sagenodus).....	354	antiquus (Agriochærus).....	663
angustus (Sandalodus).....	288	antiquus (Amynodon).....	641
angustus (Tricentes).....	694	antiquus (Bison).....	688
Anisacodon.....	637, 740	antiquus (Bos).....	688
Anisichnus.....	541	antiquus (Carcharhinus).....	312
Anisodexis.....	423	antiquus (Catarhætes).....	524
Anisonchina.....	694	antiquus (Catarhætes).....	524
Anisonchus.....	602, 694, 695, 696	antiquus (Chitinodus).....	293
Anisopus.....	541	antiquus (Cœlosaurus).....	488, 489
annæ (Tricium).....	735	antiquus (Crocodylus).....	512

	Page.		Page.
antiquus (Dicotyles)	657	aquilunguis (Dryptosaurus)	488
antiquus (Diodon)	408	aquilunguis (Laelaps)	488
antiquus (Eubradys)	579	aquilunguis (Megalosaurus)	488
antiquus (Histiothorus)	402	Arachnichnus	540
antiquus (Ischyrosaurus)	461	arapahovius (Saurocephalus)	385
antiquus (Istiophorus)	402	arapalovius (Saurocephalus)	385
antiquus (Manatus)	583	aratus (Anognmus)	393
antiquus (Meleagris)	534	arcamœnus (Calamodon)	574
antiquus (Merycopater)	663	arcamœnus (Stylinodon)	574
antiquus (Miocœnus)	749	Archælus	781, 782
antiquus (Orthocynodon)	641	Archæobatis	285
antiquus (Perchoerus)	657	Archæobelus	433
antiquus (Physeter)	595	Archæoceti	585
antiquus (Pimelodus)	382	Archæopterygidæ	518
antiquus (Prionace)	312	Archæopteryx	518
antiquus (Prionodon)	312, 313	Archæornithes	518
antiquus (Psammodus)	284	Archæotherium	654, 655
antiquus (Sarcothraustes)	748	Archegosauria	420
antiquus (Thinohyus)	657	Archegosauridæ	419
antiquus (Thinopus)	552	Archegosaurus	419
antiquus (Trichechus)	583	Archelon	440
antiquus (Xiphias)	402	Archiceta	585
antivalidus (Clidastes)	467	Archornithes	518
Antliodus	279	arcidens (Hyracodon)	640
Anrodemus	489	arciferus (Leuciscus)	396
Anura	424	arciferus (Oligobelis)	396
Apatacanthus	331	arciferus (Squalius)	396
Apatemys	725	arcta (Exocampe)	544
Apatichnus	539, 540	arctata (Peplorhina)	364
Apatodon	506	arctatum (Elotherium)	655
Apatornis	520	arctatus (Cinodon)	504
Apatornithidæ	520	arctatus (Cinodon)	504
Apatosaurus	483, 485	arctatus (Uranoplosus)	373
Apedodus	359	Arctocyon	746
Aper	661	Arctocyonidæ	746
Aphelichthys	395	Arctodon	654, 655
Apheliscus	792	Arctodus	763
Aphelophis	480	Arctoidea	762
Aphelops	644, 645, 646, 647	Arctomys	720
Aphododridæ	403	Arctosaurus	492
Aphredodridæ	403	Arctotherium	763
apicalis (Calopodus)	281	arcuatus (Aëtobatus)	321
apicalis (Stratodus)	387	arcuatus (Antliodus)	279
apicalis (Zatrachys)	422	arcuatus (Chomatodus)	280
apiculatus (Anisonchus)	695	arcuatus (Dryolestes)	569
apiculatus (Hemithlæus)	695	arcuatus (Gillicus)	386
apiculatus (Otodus)	304	arcuatus (Ichthyodectes)	386, 399
apiculatus (Oxyacodon)	602	arcuatus (Orthacanthus)	264
Apœcospondyli	417	arcuatus (Physonemus)	334
appalachianus (Palæoctonus)	490	arcuatus (Pleuracanthus)	264
appalachicolus (Bison)	687	arcuatus (Portheus)	386
appalachicolus (Ovibos)	687	arcuatus (Rhineastes)	382
appendiculata (Lamna)	304	arcuatus (Stegomus)	511
appendiculatus (Corax)	309	arcuatus (Xystracanthus)	334
appendiculatus (Galeocerdo)	309	Ardea	531
appendiculatus (Galeus)	309	Ardeæ	531
appendiculatus (Otodus)	304	Ardeidæ	531
approximatum (Brontozoum)	543	Ardeinæ	531
approximatus (Eubrontes)	543	Ardeoidea	531
Aprion	312	arenarius (Hybemys)	448
Apriondon	312, 313	arenarum (Merychys)	669
Apsopelix	390	arenatus (Macrepistius)	378
apternus (Phenacodus)	605	arenosa (Baëna)	437
aptus (Crocodylus)	512	arenosus (Strepodus)	360
aquaticus (Scalops)	738	argentatus (Larus)	525
Aquila	536	Argentiniidæ	392

	Page.		Page.
Argoides.....	540, 550	atlanticus (Squalodon).....	589
Argozoum.....	540, 548, 550	Atlantochelys.....	439, 440
argutus (Venustodus).....	287	Atlantosauridae.....	484
arisaigensis (Dendrodus).....	359	Atlantosaurus.....	484
arizonica (Bos).....	689	atropius (Belosphys).....	592
armata (Acanthaspis).....	339	atropius (Ixacanthus).....	592
Aristoschlechi.....	795	atropius (Priscodelphinus).....	592
armatum (Anthracotherium).....	652	atrox (Clastes).....	377
armatum (Diceratherium).....	644	atrox (Creosaurus).....	489
armatus (Coryphodon).....	698, 699	atrox (Dinotomius).....	779
armatus (Elomeryx).....	652	atrox (Felis).....	782
armatus (Heptacodon).....	651	atrox (Lepidosteus).....	377
armatus (Metalophodon).....	698	atrox (Lepisosteus).....	377
armatus (Pristicladodus).....	270	atrox (Uintamastix).....	702
armatus (Rhinoeros).....	674	atrox (Uncia).....	782
armatus (Stegosaurus).....	486, 496	attenuatus (Loxolophus).....	745
Arotus.....	356	attenuatus (Polymastodon).....	562
Artediellus.....	407	attenuatus (Pristis).....	316
Arthrodira.....	344	attenuatus (Protochriacus).....	745
articulatus (Dissorhophus).....	420	attenuatus (Titanichthys).....	348
Artiodactyla.....	647	Aublysodon.....	488, 489
Artionychia.....	662	Auchenia.....	678, 679
Artionyx.....	663	audax (Portheus).....	384
Arvicola.....	728, 729	audax (Saurocephalus).....	384
Arvicolidæ.....	728	audax (Xiphaetinus).....	384
Arvicolina.....	728	augusta (Uncia).....	782
Arvicolini.....	728	augustus (Felis).....	782
Asineopidae.....	403	aulacodus (Palaeoconus).....	490
Asineops.....	404	aulacodus (Suchoprion).....	490
aspasiæ (Psittacotherium).....	574	Aulaxodon.....	577, 578, 579
asper (Glyptodon).....	581	auriculatus (Carcharias).....	307
asperum (Schistopleurum).....	581	auriculatus (Carcharodon).....	307
Aspidochelydæ.....	436	auritus (Agriochernus).....	663
Aspidodus.....	288	auritus (Colymbus).....	523
Aspidichthys.....	345	auritus (Euclotaphus).....	663
Aspidocephali.....	340	auritus (Podiceps).....	523
Aspidoganoidei.....	339	australe (Anchitherium).....	613
Aspidophorus.....	345	australis (Champsosaurus).....	461
Aspidorhini.....	339	australis (Mesohippus).....	613
assurgens (Diacodon).....	748	australis (Miohippus).....	613
assurgens (Mioclenus).....	748	Aves.....	517
assurgens (Triisodon).....	748	avunculus (Tricium).....	735
assurgens (Goniacodon).....	748	avus (Diplacodon).....	638
Astephus.....	382	avus (Merychippus).....	616
Asteracanthus.....	331	avus (Protohippus).....	616
Asterolepidae.....	342	avus (Teleodus).....	638
Asterolepides.....	342	avus (Titanotherium).....	638
Asterolepis.....	342	Axestomys.....	455
Asteropychius.....	330	Axestus.....	455
Asterospondyli.....	275, 301	Azygostei.....	341
Asterosteidae.....	349		
Asterosteus.....	349		
Asthenodon.....	570		
Astraspis.....	342		
Astrodon.....	484		
astuta (Bassaris).....	764		
astutus (Bassariscus).....	764		
astutus (Opisthotomus).....	792		
Athea.....	435		
Athea.....	435		
Athecata.....	435		
Atheconia.....	435		
Athya.....	530		
atlantica (Macrophoca).....	589		
atlanticus (Artediellus).....	407		
atlanticus (Colophonodon).....	589		

B.

baculiformis (Batacanthus).....	334
Bacm.....	437
Bacnidae.....	437
baileyanus (Trienopus).....	553
baileyi (Sauroideichmites).....	553
bairdi (Anchitherium).....	613
bairdi (Leuciscus).....	396
bairdi (Mesohippus).....	613, 614
bairdi (Miohippus).....	613
bairdi (Palaeotherium).....	613
bairdi (Titanotherium).....	613
bairdianus (Hyrachyus).....	638
bairdianus (Lophiodon).....	639
bairdii (Semotilus).....	596

	Page.		Page.
bairdii (Squalius)	396	Batodon	565
Balæna	599, 600, 601	Batoidei	315
Balænidæ	598	Batrachia	409, 425
Balænodon	596	Batrachichnus	541
Balænoidea	598	Batrachiosaurus	465, 466
Balænoptera	599, 600	Batrachiotherium	465, 466
Balænopteridæ	598	Batrachocephalus	411
Balænopterina	598	Batrachoides	511
baldwini (Chriæus)	745, 746	Batrachoidichnites	538, 541
baldwini (Deltatherium)	745	batrachops (Catostomus)	394
baldwini (Mioclenus)	607	Batrachopus	541
Balistes	407	bauri (Culophysis)	193
Balistidæ	407	bauri (Cœlurus)	493
Balistini	407	bauri (Tanystropheus)	493
ballardi (Lophiotherium)	611	beani (Mioplosus)	404
ballardi (Orohippus)	611	beata (Emys)	444
ballardi (Pachynolophus)	611	beatus (Adocus)	444
ballensis (Mesogaulus)	721	beecheri (Ganorhynchus)	352
balloviæus (Sciurus)	719	Belemnoziphius	597
Baphetes	418	bella (Palæospiza)	537
Baphetidæ	417	bellicincta (Janassa)	276
Baptanodon	463	bellicinctus (Tanaodus)	276
Baptanodonta	461	bellifer (Cladodus)	268
Baptanodontia	463	bellulus (Apatemys)	725
Baptanodontidæ	463	bellulus (Asteroptychius)	330
Baptemys	445	bellulus (Ctenopetalus)	281
Baptornis	522	bellulus (Ctenoptychius)	281
Baptosaurus	468	bellulus (Petalodus)	281
barcenæi (Equus)	624	bellulus (Platyxystrodus)	290
Barornis	522	bellulus (Xystrodus)	290
Baropus	511	belhus (Aletornis)	527
Barosaurus	485	bellus (Apatichnus)	540
barrattii (Anomœpus)	550	bellus (Apatemys)	725
barrattii (Chimæra)	550	bellus (Cimolomys)	559
barrattii (Chimærichnus)	550	bellus (Tinodon)	567
barrattii (Sauropus)	550	Belodon	509, 510
basalis (Campodus)	296	Belodontia	509
basalis (Orodus)	296	Belodontidæ	509
Bascanion	180	Belosphys	502, 503
Baseodon	465	Beluga	594
basifissus (Crocodilus)	515	belviderensis (Plesiochelys)	439
basilatus (Enhydrocyon)	770	bentonia (Protosphyraena)	379
basilatus (Hyænocyon)	770	bentoniana (Protosphyraena)	379
Basilemys	445	bentonianum (Trinaenomerum)	458
Basilosauridæ	586	Bernicla	530
Basilosaurus	586, 587, 588, 589	Berycidæ	402
basitruncatus (Crocodilus)	515	berycinus (Pelecopsis)	399
basitruncatus (Holops)	515	Berycoidea	402
Bassarididæ	764	Beryx	393, 402
Bassaris	764	bialveatus (Deltodopsis)	291
Bassariscus	764	bicalcaratus (Platygonus)	660
Batacanthus	334	bicarınatus (Dysganus)	504
Bathmodon	697, 698, 699, 700	bicornis (Diplodus)	267
bathmodon (Pantolambda)	696	bicornis (Thrinacodus)	267
Bathmodontidæ	697	bicristatus (Stemmatias)	298
bathrodon (Ammodon)	656	bicristatus (Stemmatodus)	298
bathrodon (Elotherium)	656	biculminatus (Diadectes)	427
Bathrodon	793	biculminatus (Triisodon)	748
Bathycheilodus	270	bicuspidatus (Leptosyrax)	304
Bathygnathus	491	bicuspis (Ictops)	739
bathygnathus (Miæcis)	748, 760	bicuspis (Palæictops)	739
bathygnathus (Mioclenus)	748	bicuspis (Stypolophus)	739
bathygnathus (Sarcotræustes)	748	bifidus (Antipus)	540
bathygnathus (Untacyon)	760	bifidus (Fissodus)	277
Bathyopsidæ	700	biformis (Helodus)	286
Bathyopsis	700	bifurcatus (Lefalophodon)	706

	Page.		Page.
bifurcatus (Stemmatias)	298	bovis (Bos)	690
bifurcatus (Stemmatodus)	298	bowmani (Conosaurops)	388
bilobatum (Chalicotherium)	691	bowmani (Conosaurus)	388
bilobatus (Trimerorhachis)	420	brabensis (Peripitychus)	693
Biloricata	580	Brachydectes	413
bipartitus (Myledaphus)	326	brachygnathus (Portheus)	384
bitardicus (Dimetrodon)	432	brachygnathus (Xiphaetinus)	384
biserialis (Pleuracanthus)	264	brachylophum (Anchitherium)	613
Bison	500, 687, 688	brachylophus (Meshippus)	613
bison (Bison)	689	brachylophus (Miohippus)	613
bison (Bos)	689	Brachymeryx	670
bison (Lepidosteus)	377	brachyodon (Pristis)	316
bisornata (Pseudemys)	449	Brachypodinae	646
bisornata (Trachemys)	449	brachyops (Deinictis)	780, 781
bispinosus (Gasterosteus)	397	brachyops (Diniectis)	780
bisulcatus (Esthonyx)	715	brachyops (Hoplophoneus)	780
bisulcatus (Geomys)	730	brachyops (Machaerodus)	780
bisuleus (Myliobatis)	320	brachyops (Nimravus)	781
bisuleus (Triconodon)	567	brachyops (Pariotichus)	428
bitruncata (Palæaspis)	340	brachyops (Pogonodon)	780
biturgidus (Polydectes)	514	Brachypsalis	768
blackburnii (Sardinius)	391	brachyptera (Amphiplaga)	403
blakei (Echinorhinus)	315	brachypternus (Phenacodus)	604
Blarina	738	brachypus (Canis)	775
Blastomeryx	682	brachyrhinus (Toxochelys)	442
Boaidæ	479	brachyrhynchus (Ancodon)	653
Boavus	479	brachyrhynchus (Ancodus)	653
Boidæ	479	brachyrhynchus (Hyopotamus)	653
Booidea	681	Brachyrophus	506
Bolodon	427	Brachysaurus	471
Bolodon	557	brachyspondylus (Basilosaurus)	586
Bolodontidæ	557	brachyspondylus (Zeuglodon)	586, 587
Bolodontida	557	brachystomus (Mioclanus)	649
Bolosauridæ	434	brachystomus (Pantolestes)	649
Bolosaurus	428, 434	brachystomus (Trigonolestes)	649
bombifrons (Boötherium)	687	Bradytheria	575
bombifrons (Bos)	687, 688	brainerdi (Gonatodus)	365
bombifrons (Deinictis)	779	brainerdi (Palæoniscum)	365
bombifrons (Diniectis)	779	Branchiosauria	410
bombifrons (Ovibos)	687, 688	Branchiosauridæ	410
bonasus (Bos)	689	Branchiosaurus	410
Boöcherus	654, 655	Branta	530
boöps (Balæna)	600	braunii (Ischypterus)	375
boöps (Helaletes)	625, 626	braunii (Semionotus)	375
boöps (Hyrachyus)	625	brettonensis (Psammodus)	362
boöps (Megaptera)	600	breviarcus (Alburnops)	395
Boötherium	687	brevicalcarata (Sinopa)	752
boreale (Telmatherium)	631	brevicalcaratus (Stypolophus)	752
boreale (Telmatotherium)	631	brevicolcarabus (Stypolophus)	752
borealis (Bathygnathus)	491	breviceps (Hadrosaurus)	503
borealis (Blastomeryx)	682	breviceps (Hyomeryx)	665
borealis (Palæosyops)	631	breviceps (Trachodon)	503
borealis (Rhytina)	584	brevicollis (Champsosaurus)	461
Borophagus	776	brevicollis (Crocodylus)	512
Bos	687, 688, 689, 690	brevicostatus (Molgophis)	412
boschas (Anas)	529	brevicens (Anchippus)	615
boschas (Anas)	529	brevicens (Glyptosaurus)	475
Bothremydidæ	438	brevicens (Mammut)	710
Bothremys	438	brevicens (Mastodon)	710
Bothriodon	652	brevicens (Tetrabelodon)	710
Bothriolepididæ	342	brevicens (Trilophodon)	710
Bothriolepis	343, 361	brevifacies (Cyclopidius)	670
Bothriolabis	656, 658, 659	brevifacies (Pitheciestes)	670
Bottosaurus	513, 514, 515	brevifemur (Plesiosaurus)	456
Bovidæ	686	brevior (Otolithus)	409
Bovinæ	688	brevipinne (Amyzon)	395

	Page.		Page.
cameloides (Gomphotherium)	676	Carcharodon	307, 309
cameloides (Ithygrammodon)	674	Carcharodontinae	307
cameloides (Protomeryx)	676	Carcharopsis	271
Camelomeryx	672	Carcinodon	762
Camelops	679	Cardiodontidae	482
Camelus	680	Cariacus	684
campbelltonensis (Cephalaspis)	341	caribou (Rangifer)	686
campester (Mastodon)	710	carinata (Sphyræna)	389
campester (Tetrabelodon)	710	Carinatae	523
campester (Tetralophodon)	710	carinatus (Cimolichthys)	389
campestre (Mammut)	710	carinatus (Cladodus)	268, 268
Campodus	296, 297	carinatus (Enchodus)	389
Camptomus	562	carinatus (Orodus)	295
Camptonotidae	501	carinatus (Phasganodus)	389
Camptonotus	501	carinatus (Physonemus)	333
Camptosauridae	501	carinidens (Peryptichus)	693
Camptosaurus	501	carinicolis (Crematosaurus)	477
canadense (Harpagmotherium)	708	cariosus (Trionyx)	453
canadensis (Anser)	530	carnifex (Dissacus)	749
canadensis (Bernicla)	530	Carnivora	743
canadensis (Bothriolepis)	343	Carnivora primitiva	744
canadensis (Branta)	530	Carnivora vera	762
canadensis (Castor)	721	carolinae (Amblypterus)	365
canadensis (Cervus)	685	carolinensis (Anas)	529
canadensis (Cheirolepis)	366	carolinensis (Belodon)	510
canadensis (Coccoosteus)	344	carolinensis (Clepsisauros)	510
canadensis (Dinichthys)	346	carolinensis (Dasyatis)	319
canadensis (Elaphus)	685	carolinensis (Dinoziphius)	595
canadensis (Felis)	782	carolinensis (Hoplocetus)	595, 596
canadensis (Lutra)	769	carolinensis (Mosasaurus)	465
canadensis (Ponerichthys)	346	carolinensis (Nummopalatus)	401
canadensis (Pterichthys)	343	carolinensis (Odax)	401
canavus (Miacy)	760	carolinensis (Palæosaurus)	510
canavus (Uintacyon)	760	carolinensis (Pharyngodopilus)	401
cancellatus (Ameiurus)	383	carolinensis (Physeter)	595, 596
caniculus (Isacis)	739	carolinensis (Phytosaurus)	510
caniculus (Mesodectes)	739	carolinensis (Pycnodus)	373
Canidae	759, 769	carolinensis (Querquedula)	589
Canimartes	774	carolinensis (Rhytidodon)	510
Canine	770	carolinensis (Rutiodon)	510
Canini	770	carolinensis (Trygon)	319
caninus (Homocamelus)	678	carteri (Emys)	450
caninus (Pachyrhizodus)	387	carteri (Omomys)	788
Canis	767, 771, 772, 773, 774, 775	Caryoderma	451
cannaliratus (Ctenacanthus)	327	castilli (Merychippus)	616
caperatus (Meniscoëssus)	561	castilli (Protohippus)	616
caperatus (Tripiodon)	561	Castor	721, 722, 729, 733
Caprinæ	687	Castoridae	721
Captorhinus	429	castoridens (Trogosus)	717
Carangidae	403	Castorini	721
carbonarius (Helodus)	286	Castoroides	733
carbonarius (Orthopleurodes)	289	Castoroididae	733
carbonarius (Pœcilodus)	293	Cataphracti	406
carbonarius (Polyrhizodus)	282	Catapleura	441
carbonarius (Sandalodus)	289	Catarhactes	524
carbonarius (Vaticinodus)	290	Catathlæus	693
Carcharie	510, 512	Catarractes	524
Carcharias	301, 307, 308, 312, 313	catenatus (Plastomenus)	453
carcharias (Carcharias)	308	Cathartes	535
carcharias (Carcharodon)	308	Cathartidae	535
carcharias (Squalus)	308	Cathartides	535
Carchariidae	301, 310	catocopis (Hoplophoneus)	778
Carchariina	311, 312	catocopis (Machærodon)	778
Carchariinae	301	catocopis (Machairodus)	778
Carcharininae	312	Catodon	595
Carcharhinus	312	catodon (Beluga)	594

	Page.		Page.
Catodontidæ.....	595	Ceratoptera.....	321
Catopsalis.....	562, 563	Ceratopterina.....	321
Catopteridæ.....	370	Ceratorhina.....	647
Catopterus.....	551, 570	Ceratosauria.....	493
Catostomidæ.....	394	Ceratosauridæ.....	493
Catostomina.....	394	Ceratosaurus.....	493
Catostomus.....	394	Cercariomorphus.....	417
caudata (Helcura).....	546	Cercoleptidæ.....	764
caudatum (Gigantitherium).....	545	Cercoleptina.....	764
caudatum (Otozom).....	547	cerebralis (Hoplophoneus).....	778
caudatus (Gigadipus).....	545	cerebralis (Machærodon).....	778
caudatus (Gigandipus).....	545	Cervales.....	685
caudatus (Nanomeryx).....	650	Cervicornia.....	681
caudatus (Nanopus).....	547	Cervidæ.....	681, 686
caudatus (Tarsodactylus).....	552	Cervina.....	684
caudifer (Hylopus).....	546	Cervina.....	684
Caulodon.....	484	Cervulinæ.....	682
cavatus (Allomys).....	718	Cervus.....	683, 684, 685, 686
cavatus (Hadrosaurus).....	503	Cestracion.....	299, 314
cavatus (Meniscomys).....	718	Cestracionidæ.....	295
cavatus (Trachodon).....	503	Cestraciones.....	290
Cavicornia.....	681, 686	Cestraciontes.....	298, 299
cavifrons (Boötherium).....	687	cestriensis (Pœcilodus).....	293
cavifrons (Entoptychus).....	731	Cetacea.....	585
cavifrons (Ovibos).....	687	Cete.....	585
Cavia.....	734	Ceterhinops.....	590
Caviidæ.....	734	cetiformis (Uronautes).....	457
cavirictus (Pantolambda).....	696	Cetiosauria.....	482
Cecomorphæ.....	523	Cetiosauridæ.....	482, 484
cedrensis (Trimerodus).....	671	cetoides (Basilosaurus).....	587
celatus (Diacodon).....	740	cetoides (Zeuglodon).....	587, 588
celer (Anchitherium).....	613	Cetomorpha.....	585
celer (Apatornis).....	520	Cetophis.....	593
celer (Colonomys).....	725	Cetotherium.....	598, 599
celer (Ichthyornis).....	520	chacensis (Pantolestes).....	649
celer (Laosaurus).....	501	chacensis (Trigonolestes).....	649
celer (Meleagris).....	534	Chænohyus.....	658, 659
celer (Mesohippus).....	613	Chæropotamus.....	652
celer (Miohippus).....	613	Chætodipterus.....	400
celer (Protoceras).....	673	Chætodon.....	400
cellulosus (Trionyx).....	453	Chætodontidæ.....	400
Cenoplacentalia.....	563	Chalicomys.....	722
cenopus (Merycochærus).....	668	Chalicotheria.....	690
Centemodon.....	509, 510	Chalicotheriida.....	690
Centetodon.....	740	Chalicotheriidæ.....	690
Centracodon.....	740	Chalicotherioiden.....	690
Centrobati.....	317	Chalicotherium.....	579, 691
Centrobatidæ.....	317	Chameleo.....	478
Cephalaspidæ.....	340	Chamæleon.....	478
Cephalaspides.....	340	Chamæleonidæ.....	478
Cephalaspis.....	339, 341	Chamæleontes.....	478
Cephaloptera.....	321	chamense (Meniscotherium).....	605
Cephalotropus.....	598	chamensis (Alligator).....	512
cephalum (Cetotherium).....	599	chamensis (Crocodylus).....	512
cephalus (Eschrichtius).....	599	Chamops.....	474
Ceraterpeton.....	414	Champsodelphis.....	590
Ceraterpetum.....	414	Champsosauridæ.....	460
ceratocephalus (Eurinotus).....	376	Champsosaurus.....	457, 460
Ceratodontia.....	355	chapmani (Mammut).....	710
Ceratodontidæ.....	355	chapmani (Mastodon).....	710
Ceratodus.....	354, 355	Characodus.....	360
Ceratops.....	498, 500	Charadriidæ.....	526
Ceratopsia.....	497	Charadriiformes.....	523, 526
Ceratopsidæ.....	498	Charadriomorphæ.....	526
Ceratopsoiden.....	497	Charadriornithes.....	526
Ceraptera.....	321	Charadrius.....	526

	Page.		Page.
Cheiracanthus.....	274	Chriacidae.....	744
cheiriformis (Stemmatias).....	298	Chriacus.....	744, 745, 746, 762
cheiriformis (Stemmatodus).....	298	Chroicocephalus.....	525
Cheirodus.....	369	chromis (Pogonias).....	406
Cheirolepis.....	366	chrysodon (Gymnoptychus).....	725
Cheirotherium.....	542	cibollicus (Eunys).....	447
Cheirotheroides.....	541	ciceronius (Ectosteorhachis).....	362
Chelichnus.....	542	ciceronius (Megalichthys).....	362
Chelidridæ.....	446	ciceronius (Parabatrachus).....	362
Chelone.....	441, 442, 443	Ciconiiformes.....	528
Chelonemydidae.....	440	cimarronis (Tetrabelodon).....	712
Chelonia (genus).....	443	Cimolestes.....	566
Chelonia (order).....	443	Cimolestidae.....	565
Cheloniadae.....	443	Cimoliasaurus.....	457, 458, 459
Cheloniidae.....	440, 443	Cimolichthys.....	386, 387, 389, 390
Chelonoidæ.....	443	Cimoliosaurus.....	458
Chelonoides.....	542	Cimolodon.....	559, 560
chelonyx (Mesoreodon).....	667	Cimolodontidae.....	558
Chelydrosauria.....	429	Cimolomys.....	559
Chelydra.....	446	Cimolomidae.....	558
chelydra (Merycochærus).....	668	Cimolopteryx.....	537
Chelydridæ.....	446	cinctulus (Deltodus).....	292
chelydrina (Catapleura).....	441	cinctus (Coryphodon).....	698
chelydrina (Osteopygis).....	441	cinctus (Deltodus).....	292
Chelydrinae.....	446	cinctus (Ectacodon).....	698
Chelydroidæ.....	446	cinctus (Oligotomus).....	611
chemungensis (Ctenacanthus).....	327	cinctus (Orohippus).....	611
Chen.....	530	cinctus (Pachynolophus).....	611
Chenomorphæ.....	528	cinctus (Pliolophus).....	611
Chersidae.....	449	cinerearum (Clidastes).....	466
Chersites.....	449	cinereoargentatus (Canis).....	775
chesterensis (Chomatodus).....	280	cinereoargentatus (Urocyon).....	775
chesterensis (Phyonemus).....	333	cinereoargentatus (Vulpes).....	775
chicopensis (Acentrophorus).....	374	cingens (Hypisodus).....	672
Chilonyx.....	427	cingulatus (Deltodus).....	292
Chilotæ.....	452	Cinodon.....	504
Chimæra.....	324, 550	Cinosternidae.....	446
Chimærae.....	553	Cinodon.....	504
Chimærichnus.....	550	circularis (Platysomus).....	369
Chimæridæ.....	323	circulosus (Embaphias).....	459
Chimæroidea.....	322	circumagens (Apatichnus).....	540
Chimæroidei.....	322	Cistuda.....	449
Chirocentridæ.....	383	Cistudinidae.....	447
Chirodus.....	369	Cistudo.....	449
Chirogidae.....	557	clackmannensis (Ichthyolithus).....	362
Chirolepis.....	366	Cladacanthus.....	335, 336
Chiroptera.....	711	Cladocyclus.....	398
Chirotherium.....	512	Cladodontidae.....	267
Chirox.....	557	Cladodus.....	267, 272
chirurgus (Pelecopterus).....	379	Cladoselache.....	272
chirurgus (Protosphyraena).....	379	Cladoselachidae.....	272
Chisternon.....	455, 458	Cladonodon.....	747
Chitinodus.....	293	Clangula.....	530
Chlamydothorium.....	581	Clasrhynchus.....	500
Chlamytherium.....	581	Claosauridae.....	502
Cholodus.....	277	Clasaurus.....	502, 503
Chomatodus.....	276, 277, 279, 286, 287	clarkensis (Hybodus).....	299
Chondroganoidæ.....	365	clarki (Brontichthys).....	348
Chondropterygii.....	262	clarki (Cladodus).....	272
Chondrostei.....	365	clarki (Cladoselache).....	272
Chondrosteus.....	371	clarki (Dinichthys).....	346, 347
Chonespondylus.....	463	clarki (Gorgonichthys).....	346
Choneziphius.....	596, 597	clarki (Monocladodus).....	272
chonops (Choneziphius).....	597	clarki (Palamopus).....	544
chonops (Proroziphius).....	597	clarki (Ponerichthys).....	347
Chorotherium.....	664	clarki (Titanichthys).....	348

	Page.		Page.
clarkianus (Siphonocetus)	599	Cœlogenys.....	734
clarkii (Actinophorus)	368	Cœlophysis.....	493
clarkii (Ctenacanthus)	327	cœlops (Choneziphius).....	596
clarkii (Tegeolepis)	368	cœlops (Eboroziphius).....	596
clarkii (Trachosteus)	348	Cœlorhynchus.....	331
Clastes.....	376	Cœlosaurus.....	488, 489
clausa (Terrapene).....	449	cœlospondylus (Ixacanthus)	592
clavata (Lamna).....	302	Cœlosteus.....	361
clavatus (Aspidichthys)	345	Cœluria.....	492
clavatus (Pleuroptyx).....	417	Cœluridæ.....	492
claviger (Naosaurus).....	432	Cœlurus.....	493
clavirostris (Crocodylus)	515	Cœnididæ.....	732
clavirostris (Gavialis).....	515	Cœnopidæ.....	642
clavirostris (Sphenosaurus)	515	cœnopus (Merycochoerus)	668
clavis (Crocodylus).....	512	cognatus (Anchitherium)	617
clavum (Elotherium)	655	cognatus (Parahippus).....	617
clavus (Entelodon).....	655	coicodus (Pantylus).....	429
claybornensis (Otolithus)	408	colletti (Orodus).....	295
claypolei (Cladodus)	268	colletti (Clepsydraps)	431
Clemmys.....	419	Collettosaurus.....	542
Cleipsisaurus.....	492, 510	collinsii (Mastodon)	709
Clepsydrodridæ.....	431	collinsii (Tetracaulodon)	709
Clepsydraps.....	431, 432	Colodon.....	626
Clepsydsaurus.....	492	Colonoceras.....	639
Clidastes.....	466, 470	Colodontinæ.....	624
Clidastidæ.....	464	Colonosaurus.....	519, 520
clidastoides (Lestosaurus)	469	Colonymys.....	725
clidastoides (Platecarpus)	469	Colophonodon.....	588, 589
Climatus.....	274, 329	coloradense (Titanotherium)	633
Climaxodus.....	275, 276	coloradoensis (Megacerops)	633
Clinodactyla.....	607, 648	coloradoensis (Megaceratops)	633
clintonensis (Onchus).....	326	coloradoensis (Menodus).....	633, 636, 637
clintoni (Onchus).....	326	coloradoensis (Oreodon).....	666
Cliola.....	396	coloradoensis (Platyrhachis)	477
clivosa (Priscacara).....	401	Coloreodon.....	662, 663, 664
cloacina (Anaptoгония)	728	Colosteidæ.....	419
cloacinum (Sygium).....	728	Colosteus.....	414, 419
cloacinus (Erethizon).....	733	Colotaxis.....	725
Clupacei.....	390	Coluber.....	480
Clupea.....	391, 392	Colubridæ.....	480
Clupeidæ.....	390	Colubrina.....	480
Clupeinæ.....	390	columbi (Elephas).....	713
Clupeoidei.....	390	columbi (Euelephas).....	713
elusius (Thomomys).....	730	columbianus (Pediocetes).....	534
clypeata (Anas).....	529	columbiensis (Holcodus).....	469
clypeata (Spatula).....	529	colurus (Anchisaurus).....	491
coalescens (Plastomenus)	454	Colymbi.....	523
coalescens (Trionyx).....	454	Colymbidæ.....	523
coarctatum (Elotherium)	655	Colymbides.....	523
coarctatus (Periptychus)	693	Colymbiformes.....	523
Cobitidæ.....	394	Colymboidea.....	523
coccinarum (Typothorax)	511	Colymbus.....	523
Coccosteidæ.....	344, 345	comes (Otolithus).....	409
Coccosteinæ.....	344	comma (Conoryctes).....	573
Coccosteus.....	342, 344, 345	commune (Amyzon).....	395
Cochliodontidæ.....	286	communis (Plastomenus)	452
Cochliodus.....	289, 292, 293, 294	compactus (Ctenopterychius)	282
Coccytinidæ.....	415	compactus (Harpacodus).....	282
Coccytinus.....	416	compactus (Stemmatias).....	298
Cœlacanthi.....	363	compactus (Stemmatodus)	298
Cœlacanthidæ.....	363	complanatus (Deltodus).....	292
Cœlacanthini.....	363	complanatus (Sandalodus).....	292
Cœlacanthus.....	363	complicatus (Equus).....	622
cœlatus (Meniscoœssus)	561	Composaurus.....	510
cœlatus (Tripiodion).....	561	compressa (Lamna).....	305
Cœlodus.....	373	compressus (Ælurodon).....	774

	Page.		Page.
compressus (Ctenacanthus)	327	conidens (Triisodon)	748
compressus (Diacranodus)	265	coniferus (Anisonchus)	695, 696
compressus (Dicotyles)	660	coniger (Cladodus)	268
compressus (Didymodus)	265	Coniophis	481
compressus (Diplodus)	265, 266	Coniornis	522
compressus (Dissodus)	266	Conocheetes	430
compressus (Dittodus)	266	conodon (Clidastes)	467
compressus (Elliptodon)	473	Conoryctes	573, 694, 748
compressus (Gyracanthus)	335	Conoryctidæ	572
compressus (Helodus)	271, 287	Conosaurops	388
compressus (Hybocladodus)	271, 287	Conosaurus	388
compressus (Peripleurodus)	287	conquistus (Meniscoëssus)	560, 561
compressus (Platygonus)	660	conradi (Belosphy)	592
compressus (Pleuracanthus)	265	conradi (Delphinus)	592
compressus (Ptyctodus)	323	conradi (Ixacanthus)	592
compressus (Stethacanthus)	333	conradi (Priscodelphinus)	592
Compsacanthus	265	conradi (Puffinus)	526
Compsemys	437, 445	consimilis (Oracanthus)	335
Compsosaurus	509	consolidatus (Helodus)	286
comstocki (Didelphis)	571	consors (Calops)	673
comstocki (Didelphys)	571	consors (Laosaurus)	501
comstocki (Peratherium)	571	constabei (Protocatostomus)	394
comstockianum (Peratherium)	571	contortidens (Carcharias)	301
Complichnus	542	contortidens (Careharodon)	308
comptus (Chomatodus)	280	contortidens (Lamna)	301
comptus (Didelphodon)	566	contortidens (Odontaspis)	301
comptus (Didelphops)	566	contortus (Galeocerdo)	311
comptus (Entomodon)	740	contracta (Empo)	387
comptus (Protoceras)	673	contractus (Anogmus)	393
comptus (Pteranodon)	507	contractus (Cimolichthys)	387
Conacodon	695	contractus (Pachyrhizodus)	393
conangulus (Trimerorhachis)	420	contraversus (Dipterus)	351
concamerata (Platypterna)	549	contusor (Thecachampsa)	512
concameratus (Harpedactylus)	549	conulus (Oracodon)	562
concavus (Dactylodus)	282	conversidens (Equus)	623
concavus (Polyrhizodus)	282	convexus (Deltodopsis)	291
concentrica (Gephyura)	398	convexus (Orthopleurodus)	289
concentricus (Trionyx)	454	convexus (Sandalodus)	289
conchigerus (Zatrachys)	422	convolutus (Aspidodus)	288
conchiolepis (Sagenodus)	354	convolutus (Deltodopsis)	291
Conchiopsis	363, 364	convolutus (Pœcilodus)	293
conchiopsis (Sagenodus)	354	cookii (Bothremys)	428
Conchodus	352	cookii (Leptomylus)	325
concinus (Acanthodes)	273	copeanus (Mosasaurus)	465
concinus (Acanthoëssus)	273	copeanus (Myliobatis)	320
concinus (Cladodus)	268	copeanus (Sagenodus)	354
concolor (Felis)	782	copei (Aceratherium)	643
condoni (Anchitherium)	613	copei (Cænopus)	643
condoni (Anser)	530	copei (Hybodus)	299
condoni (Dicotyles)	660	copei (Meshippus)	614
condoni (Mihippus)	613	copei (Mihippus)	614
condoni (Palæocheirus)	658	copei (Phœnicopterus)	531
condoni (Platygonus)	660	copei (Trichophanes)	404
condonianus (Leucus)	395	eophater (Anisonchus)	695
condonianus (Rutilus)	395	eophater (Conacodon)	695
Condylarthra	601	eophater (Haploconus)	695
confertus (Nimrayus)	781	Copodus	285
congrops (Liodon)	472	cor (Otolithus)	408
congrops (Tylosaurus)	472	Coracomorphæ	537
Conicodon	674	Coracornithes	537
coniculus (Helodus)	286	Corax	309, 311
conidens (Diacodon)	749	cordatus (Gyracanthus)	335
conidens (Eschatus)	680	cordatus (Holops)	516
conidens (Mioclenus)	749	cordatus (Pantylus)	429
conidens (Protatoga)	401	corniculatus (Haploconus)	694
conidens (Tatoga)	401	cornubius (Squalus)	304

	Page.		Page.
cornutidens (<i>Orycterocetus</i>)	595, 596	couperi (<i>Mosasaurus</i>)	465
cornutidens (<i>Physeter</i>)	595	coxanus (<i>Helodus</i>)	293
cornutum (<i>Telmatotherium</i>)	632	coxianus (<i>Ctenacanthus</i>)	327
cornutum (<i>Tinoceras</i>)	704	crampianus (<i>Bison</i>)	688
cornutum (<i>Uintatherium</i>)	704	crampianus (<i>Bos</i>)	688
cornutus (<i>Dolichorhinus</i>)	632	Craspedoti	436
cornutus (<i>Eobasileus</i>)	704	craspedotum (<i>Hyracotherium</i>)	609
cornutus (<i>Loxolophodon</i>)	704	craspedotus (<i>Eohippus</i>)	609
coronatus (<i>Cephalotropus</i>)	598	crassa (<i>Chelydra</i>)	446
corrugata (<i>Eurylepis</i>)	366	crassa (<i>Lamna</i>)	304
corrugata (<i>Haplolepis</i>)	366	crassa (<i>Oxyrhina</i>)	305
corrugata (<i>Mecolepis</i>)	366	crassangulum (<i>Cetotherium</i>)	599
corrugatus (<i>Agassizodus</i>)	296	crassartus (<i>Lestosauros</i>)	470
corrugatus (<i>Campodus</i>)	296	crassartus (<i>Liodon</i>)	470
corrugatus (<i>Clanodon</i>)	747	crassartus (<i>Platecarpus</i>)	470
corrugatus (<i>Dinichthys</i>)	348	crassicauda (<i>Hypsibema</i>)	497
corrugatus (<i>Mioclanus</i>)	746	crassicollidens (<i>Tricentes</i>)	746
corrugatus (<i>Orodus</i>)	296	crassicornis (<i>Allopius</i>)	634
corrugatus (<i>Oxyclenus</i>)	746	crassicornis (<i>Bison</i>)	689
corrugatus (<i>Plastomenus</i>)	452	crassicornis (<i>Bos</i>)	689
corrugatus (<i>Stenognathus</i>)	348	crassicornis (<i>Megacerops</i>)	634
corsoni (<i>Hadrianus</i>)	450	crassicuspis (<i>Conoryctes</i>)	748
corsoni (<i>Testudo</i>)	450	crassicuspis (<i>Mioclanus</i>)	748
corsonii (<i>Pappichthys</i>)	381	crassicuspis (<i>Sarcotrachustes</i>)	748
Corvide	537	crassicuspis (<i>Zetodon</i>)	748
Corvipes	542	crassidens (<i>Carcharodon</i>)	307, 308
Corvus	537	crassidens (<i>Galeocerdo</i>)	311
coryphæus (<i>Edestosaurus</i>)	469	crassidens (<i>Hoplophoneus</i>)	778
coryphæus (<i>Holcodus</i>)	469	crassidens (<i>Hyrachyus</i>)	639
coryphæus (<i>Hypotemnodon</i>)	773	crassidens (<i>Lamna</i>)	302
coryphæus (<i>Lestosauros</i>)	469	crassidens (<i>Machærodus</i>)	778
coryphæus (<i>Mesocyon</i>)	773	crassidens (<i>Mosasaurus</i>)	465
coryphæus (<i>Platecarpus</i>)	469	crassidens (<i>Odontaspis</i>)	302
coryphæus (<i>Sarcotrachustes</i>)	748	crassidens (<i>Psammodus</i>)	284
coryphæus (<i>Temnocyon</i>)	773	crassidiscus (<i>Cricotus</i>)	421
Coryphodon	697	crassifrons (<i>Loxolophodon</i>)	704
Coryphodontia	696	crassifrons (<i>Tinoceras</i>)	704
Coryphodontidæ	697	crassigenis (<i>Domina</i>)	741
Cosmacanthus	330	crassigenis (<i>Miothen</i>)	741
Cosorycinæ	682	crassipes (<i>Hesperornis</i>)	521
Cosoryx	682, 683	crassipes (<i>Lestornis</i>)	521
costatus (<i>Chomatodus</i>)	280	crassiramus (<i>Entoptychus</i>)	731
costatus (<i>Cladodus</i>)	268	crassiscutata (<i>Testudo</i>)	448, 451
costatus (<i>Cochliodus</i>)	294	crassiscutatus (<i>Colosteus</i>)	479
costatus (<i>Ctenacanthus</i>)	329	crassispinus (<i>Diplacanthus</i>)	274
costatus (<i>Dicotyles</i>)	660	crassissimus (<i>Diplacanthus</i>)	274
costatus (<i>Dipterus</i>)	351	crassiusculus (<i>Mixodectes</i>)	786
costatus (<i>Eunemecanthus</i>)	329	crassivultus (<i>Icticyon</i>)	770
costatus (<i>Lambdodus</i>)	271	crassivultus (<i>Oligobunus</i>)	770
costatus (<i>Palæocineus</i>)	497	Crassopholis	372
costatus (<i>Plastomenus</i>)	452	crassum (<i>Aceratherium</i>)	645
costellatus (<i>Cheiracanthus</i>)	274	crassum (<i>Diceratherium</i>)	645
costellatus (<i>Ctenacanthus</i>)	274	crassum (<i>Elotherium</i>)	655
costellatus (<i>Sphenacanthus</i>)	274	crassus (<i>Antiacodon</i>)	793
costelliferus (<i>Desmiodus</i>)	297	crassus (<i>Apatichnus</i>)	540
costilatus (<i>Baptemys</i>)	445	crassus (<i>Aphelops</i>)	645
costilatus (<i>Dermatemys</i>)	445	crassus (<i>Cochliodus</i>)	289
Cottidæ	406	crassus (<i>Dryptodon</i>)	575
Cottina	406	crassus (<i>Ennacodon</i>)	568
Cottus	406, 407	crassus (<i>Ennacodon</i>)	568
Cottoidea	406	crassus (<i>Entelodon</i>)	655
Cotylopidæ	662, 665	crassus (<i>Harpedactylus</i>)	545
Cotylopinæ	665	crassus (<i>Isurus</i>)	305
Cotylops	665, 666	crassus (<i>Lestophis</i>)	480
Cotylosauria	426	crassus (<i>Limnophis</i>)	480
couperi (<i>Chelonina</i>)	443	crassus (<i>Monoclonius</i>)	499

	Page.		Page.
crassus (Otodus).....	304	cruciger (Dimetrodon).....	432
crassus (Paleomytilus).....	323	cruciger (Naosaurus).....	432
crassus (Pelomax).....	655	crucipes.....	542
crassus (Priconodon).....	496	cruentus (Hyænodon).....	758
crassus (Protosorex).....	738	cruentus (Ichthyodectes).....	385
crassus (Rhinoceros).....	645, 646	Cryptodira.....	439
crassus (Rhynchodus).....	323	cryptotremus (Cottus).....	406
crassus (Sandalodus).....	289	Ctenacanthus.....	274, 296, 326, 329, 330
crassus (Sarcolemur).....	793	Ctenacodon.....	558
crassus (Telmalestes).....	793	Ctenaceton.....	415
crassus (Telmatolestes).....	793	Ctenodipneusta.....	351
crassus (Thinosaurus).....	476	Ctenodipteridæ.....	351
Creceoides.....	528	Ctenodipterini.....	351
Creceoides.....	528	ctenodon (Ichthyodectes).....	385
Crematosaurus.....	477	Ctenodontidæ.....	353
crenident (Anchippus).....	615	Ctenodus.....	351, 352, 353, 354, 355
crenident (Anchitherium).....	615	Ctenolabridæ.....	401
crenident (Desmatippus).....	615	Ctenopetalus.....	281
crenident (Equus).....	623	Ctenoptychius.....	281, 282, 283, 337
crenulatus (Aspidodus).....	288	cubitalis (Triplopus).....	640
crenulatus (Helodus).....	286	cucullatus (Lophodytes).....	529
crenulatus (Hemipristis).....	313	cucullatus (Mergus).....	529
crenulatus (Psephodus).....	288	cucullus (Antliodus).....	279
Creodontia.....	743	cucullus (Petalodus).....	279
Creosaurus.....	489	culbertsonii (Anomæpus).....	539
Criceti.....	726	culbertsonii (Emys).....	450
Cricetidæ.....	726	culbertsonii (Merycoidodon).....	666
Cricetinae.....	726	culbertsonii (Oreodon).....	665, 666, 667
Cricetus.....	726	culbertsonii (Ornithichnites).....	539
Cricotidæ.....	420	culbertsonii (Stylemys).....	450
Cricotus.....	420	culbertsonii (Testudo).....	450
crispatus (Syllomus).....	442	cultellus (Chomatodus).....	280
cristata (Cystophora).....	785	cultellus (Petalodus).....	280
cristata (Phoca).....	785	cultrata (Testudo).....	451
cristatum (Hyracotherium).....	609	cultridens (Leurocephalus).....	631
cristatus (Aublysodon).....	488	cultridens (Telmatherium).....	631
cristatus (Calops).....	673	cultridens (Telmatotherium).....	631
cristatus (Catostomus).....	394	cummingæ (Cheirolepis).....	366
cristatus (Colotaxis).....	725	cumminsi (Acheloma).....	423
cristatus (Ctenoptychius).....	282	cumminsi (Canimartes).....	774
cristatus (Deinodon).....	488	cumminsi (Equus).....	616
cristatus (Dryptosaurus).....	488	cumminsi (Merychippus).....	616
cristatus (Eohippus).....	609	cuneatum (Anchitherium).....	614
cristatus (Lælops).....	488	cuneatus (Anomæpus).....	539
cristonense (Orotherium).....	610	cuneatus (Clastes).....	377
cristonense (Pliolophus).....	610	cuneatus (Grallator).....	545
cristonensis (Hyracotherium).....	610	cuneatus (Lepisosteus).....	377
cristonensis (Pachynolophus).....	610	cuneatus (Meshippus).....	614
Crocodylia.....	508, 511	cuneatus (Miohippus).....	614
Crocodylidæ.....	511, 515	cuneatus (Ornithoidichnites).....	543, 545
crocodylinus (Orycterocetus).....	595	cuneus (Dinoceras).....	703
Crocodylus.....	512, 515	Cunichnoides.....	543
Crocodylidæ.....	511	cunulatus (Psephodus).....	288
Crocodylus.....	512, 513	cupido (Cupidonia).....	534
crocota (Hyæna).....	783	Cupidonia.....	534
cromis (Labrus).....	405	cursorius (Grallator).....	545
cromis (Pogonias).....	405	curta (Scaumenacia).....	353
Crommyodus.....	405	curtidens (Didymictis).....	754
Crossopholis.....	372	curtidens (Viverravus).....	754
Crossopteri.....	357	curtidens (Fritschia).....	413
Crossopterygia.....	357	curtidens (Hyleterpeton).....	413
Crossopterygidæ.....	357	curtirostris (Lestosaurus).....	470
Crotalidæ.....	480	curtirostris (Liodon).....	470
Crotalina.....	480	curtirostris (Platecarpus).....	470
Crotalus.....	481	curtum (Anthracotherium).....	652
crucians (Hyænodon).....	758	curtum (Brontotherium).....	634

	Page.		Page.
curtum (Phaneropleuron)	353	Cynoidea	769
curtum (Titanotherium)	634	Cynorca	588, 589, 659
curtus (Cimolestes)	566	Cynorcidae	588
curtus (Cladodus)	270	cypha (Priscacara)	401
curtus (Didymictis)	754	cyphodon (Suchopriion)	490
curtus (Dinichthys)	346	Cyphornis	532
curtus (Heptacodon)	652	Cyprinide	394
curtus (Lisgodus)	281	Cyprininae	395
curtus (Phylododus)	278	Cyprinodon	104
curtus (Ponerichthys)	346	Cyprinodontes	398
curtus (Titanops)	634	Cyprinodontidae	398
curvatus (Anomæpus)	539	Cyprinoidei	394
curvatus (Apatiehnus)	539	Cyrtacanthus	336
curvatus (Corax)	309	Cystophora	785
curvatus (Pachyrhizodus)	388		
curvatus (Stenodactylus)	551		
curvieristis (Coryphodon)	698, 699		
curvidens (Equus)	623		
curvidens (Phylododus)	401		
curvidens (Pristis)	316		
cuspidata (Lamna)	302		
cuspidata (Odontaspis)	302		
cuspidatum (Hyracotherium)	609		
cuspidatus (Bathmodon)	698		
cuspidatus (Coryphodon)	698		
cuspidatus (Epihippus)	609		
cuspidatus (Microsus)	791		
cuspidatus (Miocænus)	744		
cuspidatus (Orohippus)	609		
cuspidatus (Oxycænus)	744		
cuspidigerus (Amphicyon)	772		
cuspidigerus (Canis)	772		
cuspidigerus (Daphænus)	772		
cuspidigerus (Paradaphænus)	772		
cuvieri (Mastodon)	709		
cuvieri (Megatherium)	576		
cuyabogæ (Cocosteus)	344		
cyanoptera (Anas)	529		
cyanoptera (Querquedula)	529		
Cyathaspis	340		
cycliferus (Clastes)	377		
cycliferus (Lepisosteus)	377		
Cyclodipterini	378		
Cycloganoidei	378		
Cyclolabridæ	400		
Cyclopidius	670, 671		
cyclops (Deinictis)	780		
cyclops (Dinictis)	780		
Cyclopteridæ	407		
Cyclopteroidea	407		
Cyclopterus	407		
cyclopygia (Testudo)	451		
cyclopygius (Xerobates)	451		
Cyclospondyli	314		
Cyclotomodon	390		
Cygnus	530		
cylindricus (Ctenacanthus)	327		
cylindrifer (Calamodon)	575		
cylindrifer (Stylinodon)	575		
Cylindracanthus	331		
Cymatodus	277		
Cymbospondylus	463		
Cynocercus	442		
Cynodictis	771, 772		
Cynodesmus	773		
Cynodontomys	788		
		D.	
		Dactylodus	282, 283
		dædaleus (Orodus)	295
		Daodon	633
		Dafila	529
		dakotensis (Colodon)	626
		dakotensis (Eusmilus)	778
		dakotensis (Ictops)	739
		dakotensis (Mesonyx)	750
		Dalatidæ	314
		Dalodon	633
		Dama	684
		danæ (Ornithichnites)	552
		danana (Aquila)	536
		danauus (Eubrontes)	543
		dananus (Eupalamopus)	544
		danauus (Palamopus)	544
		d'anconæ (Notidanus)	301
		Dapedoglossus	393
		Daphanos	767, 771
		Daphænus	772
		Daphæmus	772
		Daptinus	385, 386
		Daptophilus	779, 780
		dartoni (Amiopsis)	380
		Dasyatidæ	318
		Dasyatis	319
		Dasybatidæ	318
		Dasypidæ	581
		Dasyopoda	581
		Dasyopodæ	581
		Dasyopodidæ	580, 581
		Dasyprocta	734
		Dasyproctidæ	734
		Dasyproctini	734
		Dasypus	581
		davidsoni (Balænoptera)	599
		davidsonii (Cetotherium)	599
		davidsonii (Eschrichtius)	599
		davisi (Selache)	317
		dawkinsianus (Didymictis)	754
		dawsoni (Cephalaspis)	341
		dawsoni (Hylerpeton)	413
		dawsoni (Strepsodus)	360
		deaniana (Platypterna)	549
		deanii (Ornithoidichnites)	549
		debilis (Archæurus)	781, 782
		debilis (Otolithus)	409
		debilis (Phoca)	589
		debilis (Squalodon)	589
		decedens (Chænohyus)	658

	Page.		Page.
decedens (Cyclopidius)	670	Dercetis	306, 307
decedens (Pitheciastes)	670	Dermatemydidae	444
decipiens (Otolithus)	408	Dermatemys	445, 446
decora (Leptauchenia)	670	Dermatochelyidae	436
decurrens (Ptychodus)	317, 318	Dermochelyidae	436
decussatus (Orodus)	295	Dermochelys	436
deflectus (Ancodus)	653	Dermodactylus	507
deflectus (Hyopotamus)	653	desiderata (Asterolepis)	342
deflexus (Cladodus)	268	desiderata (Astraspis)	342
deflexus (Ctenacanthus)	327	Desmathippus	615
dehiscens (Arachnichnus)	540	Desmatippus	615
Deinictis	779	Desmatochelyidae	442
Deinodon	488	Desmatochelys	443
dekayi (Crocodylus)	515	Desmatotherium	625
dekayi (Mosasaurus)	465, 466	Desmiodus	297
delicator (Paramys)	723	Desmostylus	583
delicator (Plesiartemys)	723	desorii (Isurus)	305
delicatissimus (Paramys)	723	desorii (Oxyrhina)	305
delicatissimus (Plesiartemys)	723	destructor (Petalodus)	278
delicatula (Phyllolepis)	349	devonicum (Palaeoniscum)	368
delicatula (Platypterna)	549	deweyanus (Anisichnus)	541
delicatulus (Calopus)	549	deweyanus (Anisopus)	541
delicatulus (Ornithoidichnites)	549	deweyanus (Batrachopus)	541
delicatus (Centracodon)	740	deweyi (Batrachoidichnites)	541
delicatus (Paramys)	723	deweyi (Sauroidichnites)	541
Delphinapterinae	591	dextratus (Amblypus)	538
Delphinapterus	591, 592, 594, 599	Diacium	477
Delphinidae	593	Diacodexis	593
Delphinina	593	Diacodon	740, 748, 749
Delphinodon	591	diaconus (Limnohyops)	631
Delphinoides	588	diaconus (Limnohyus)	631
Delphinus	590, 593, 593, 594	diaconus (Palaeosyops)	631
Deltatherium	745, 751, 753	Diacostalia	452
Deltodopsis	291	Diacranodus	265
Deltodus	289, 291, 293	Diactetes	127
deltoides (Pnigeacanthus)	334	Diadectidae	426
Deltoptychius	291	dialophus (Ctenodus)	354
Denderpetidae	417	dialophus (Sagenodus)	354
Denderpeton	415, 417	Diaphorocetus	596
Denderpetontidae	417	diastematicus (Mesodon)	372
Denderpetum	418	diastematicus (Typodus)	372
Dendrodus	359	Diastichus	305
dens-humani (Helodus)	286	Diatripa	522
densus (Leptomylus)	325	Dibelodon	707, 711, 712
dentatus (Cladacanthus)	336	Diceratherinae	642
dentatus (Cyrtaacanthus)	336	Diceratherium	641, 643, 644
dentatus (Diplomystus)	391	Diclonius	503, 507
dentatus (Polyrhizodus)	283	Diconodon	637
dentatus (Saurocephalus)	386	dicornutus (Lefalophodon)	704
Denticeta	588	Dicotyles	589, 657, 658, 660, 661
Denticete	588	Dicotylidae	658
Denticetes	588	Dicotylina	658
denticulata (Lamna)	302	Dicranocerus	656
denticulata (Sphyrna)	314	Dicrenodus	541
denticulatus (Helodus)	286	Dicrocerus	682, 683
depressa (Amia)	380	Dicrocynodon	568
depressa (Janassa)	276	dietyocephala (Amia)	380
depressifrons (Dicotyles)	660	Dietyocephalus	423
depressifrons (Hyops)	660	Dictyodus	399
depressus (Ctenacanthus)	327	Dictyopyge	370
depressus (Mosasaurus)	465	Dictyopygide	370
depressus (Physonemus)	333	Dictyorhabdus	325
depressus (Ptychodus)	317	Dicynodon	430
depressus (Tanaodus)	276	Dicynodontia	430
Dercetidae	396	Dicynodontidae	430
Dercetiformes	396		

	Page.		Page.
Didelphia	563	Diplodocidæ	486
Didelphidæ	570	Diplodocus	486, 496
Didelphis	570	Diplodus	265, 266, 267
Didelphodon	565	Diplognathus	348
Didelphodus	753	Diplomystus	391
didelphoides (Ictops)	739	diplophysus (Pleurolicus)	731
didelphoides (Palæictops)	739	Diplosaurus	516
Didelphops	565, 566	Diplospondyli	300
Didelphydæ	570	Diplospondylidæ	420
Didelphys	570	Diplotomodon	473
didelta (Arvicola)	728	Diplovertebridæ	420
didelta (Microtus)	728	Diplurus	364
didelta (Pitymys)	728	Dipneusta	338, 350
Didymictis	754, 755	Dipnoi	341, 350
Didymodus	265	Dipodidæ	732
digitata (Sauropoleura)	419	Dipodinae	732
digitatus (Ctenoptychius)	283	Dipriodon	560, 561
digitatus (Dactylodus)	283	Dipriodontidæ	558
digitatus (Polyrhizodus)	283	Dipteridæ	351
digitigrada (Platypterna)	549	Dipterini	351
digona (Cimolomys)	560	Dipterus	351, 354, 355
digona (Ptilodus)	560	Dipus	732
dilatatus (Pleuracanthus)	264	Diracodon	496
Dilophodon	625, 626	Dirrhizodon	313
diluviana (Mustela)	767	dirus (Canis)	775
diluvianus (Microtus)	728	dirus (Cimolichthys)	390
Dimetrodon	432	dirus (Enchodus)	390
dimidiata (Erisichthe)	379	dirus (Phasganodus)	390
dimidiata (Protosphyraena)	379	disauris (Carcharodon)	307
Diniotis	779, 780	discophorus (Cricotus)	421
Dinichthyidæ	345	discors (Anas)	529
Dinichthyinæ	345	discors (Querquedula)	529
Dinichthys	345, 348	Discosaurus	458, 459
Dinobastis	781	discrepans (Vaticinodus)	290
Dinoceras	702, 705	discurus (Hypsirophus)	488, 496
Dinocerata	701	discurus (Stegosaurus)	496
Dinocerea	701	discus (Baptanodon)	463
Dinoceratidæ	701	discus (Sauranodon)	463
Dinodon	488, 489	dispar (Brontops)	634
Dinodontidæ	487	dispar (Camptonotus)	501
Dinophis	479	dispar (Camptosaurus)	501
Dinosauria	481	dispar (Clidastes)	467
Dinotherium	708, 709	dispar (Cumnoria)	501
Dinotomius	778, 779	dispar (Edestosaurus)	467, 468
Dinoziphius	595	dispar (Ichthyornis)	520
Diodon	408	dispar (Megacerops)	634
Diodontidæ	408	dispar (Titanotherium)	634
Diodontoidea	408	disparidigitatum (Argozoum)	540
Diopæus	431	Dissacus	749
Dioplon	597	dissimilis (Megalonyx)	577, 578
Dioplotherium	582	Dissodus	265, 266, 267
Diphrysa	324, 325	Dissorhophus	420
Diplacanthidæ	274	distans (Dinoceras)	703
Diplacanthus	274	distans (Eohyus)	649, 651
Diplacodon	632, 638	distans (Lemuravus)	789
Diplarthia	607	distans (Moropus)	691
Diplaspis	340	distortus (Petalorhynchus)	278
Diplocanthus	274	Ditetrodon	701, 702
Diplocaulidæ	416	ditrignus (Conoryctes)	694
Diplocaulus	416	ditrignus (Ectoconus)	694
Diplocionus	633	ditrignus (Periptychus)	694
diploconum (Telmatherium)	631	Ditodus	265, 360
diploconum (Telmatherium)	631	divaricans (Macropterna)	548
Diplocynodon	514	divaricans (Palamopus)	548
Diplocynodontidæ	568	divaricatum (Brontozoum)	543
Diplocynodus	513, 514	divaricatum (Ceraterpeton)	414

	Page.		Page.
divaricatum (Keraterpeton)	414	durus (Mastodonsaurus)	423
divaricatus (Cottus)	406	dux (Raja)	316
divaricatus (Edaphodon)	324	Dyoplax	511
divaricatus (Eubrontes)	543	dysclerus (Oxyænodon)	759
divaricatus (Ischyodus)	314	Dysganus	504
divaricatus (Ornithoidichnites)	552	dysodus (Oxyænodon)	759
divaricatus (Otodus)	304, 795	dyspelor (Liodon)	472
diversidens (Borophagus)	776	dyspelor (Rhinosaurus)	472
diversidens (Hyæna)	776	dyspelor (Tylosaurus)	472
diversidens (Caulodon)	484	Dysporomorphæ	532
diversus (Ornithichnites)	551	Dystrophæus	497
Docodon	568		
dodgei (Daphneus)	772		
dodgei (Daphneus)	772		
dolichoceras (Brontotherium)	634		
dolichoceras (Menodus)	634		
dolichoceras (Titanotherium)	634		
dolichopsis (Cariacus)	684		
dolichopsis (Dama)	684		
Dolichorhinus	532		
Dolichosomatidæ	411		
dolichus (Enchodus)	389		
Doliodus	267		
dolloverianus (Embolophorus)	433		
dollovianus (Embolophorus)	433		
Domina	739, 741, 571		
Dorcatherium	671		
dorsalis (Neurodromicus)	481		
dorsata (Hystrix)	733		
dorsatus (Erethizon)	733		
Dorudon	587		
Doryodon	587, 589		
Drepanacanthus	333, 334		
Drepanodon	471, 778		
Dromæognathæ	522		
Dromæopappi	521		
Dromatheria	555		
Dromatheriide	555		
Dromatherium	555		
Dromocyon	750, 751		
Dromopus	543		
Drydenius	365		
Dryolestes	569		
Dryolestidæ	569		
Dryosaurus	501		
Dryptodon	575		
Dryptosauridæ	487		
Dryptosaurus	487, 489		
dubia (Lamna)	302		
dubia (Odontaspis)	302		
dubius (Rhinoptera)	321		
dubius (Zygobatis)	321		
dumblei (Mesodon)	373		
dumblei (Microdon)	373		
dumblei (Typodus)	373		
dumblianus (Palæoctonus)	490		
duplex (Carcharias)	302		
duplex (Lamna)	302		
duplex (Odontaspis)	302		
duplex (Stegosaurus)	496		
duplicatus (Diplodus)	267		
duplicatus (Gyracanthus)	335		
duplicatus (Thrinacodus)	267		
Duplicidentata	734		
durinus (Metopocetus)	598		
durus (Eupelor)	423		

F.

Eboroziphius	596
Ecaudata	425
eccentricus (Cladodus)	268
Echinorhinidæ	314
Echinorhinoidæ	314
Echinorhinus	315
Ectacodon	697, 698
Ectocion	605
Ectocium	605
Ectoconodon	692
Ectocoenus	694
Ectocynodon	428
Ectoganidæ	573
Ectoganus	576
Ectosteorhachis	362
Eczematolepis	332
Edaphodon	324, 325
Edaphosauridæ	431
Edaphosaurus	432, 433
edax (Miæcis)	760
edax (Uintacyon)	760
Edentata	571, 584
Edestidæ	337
Edestosauridæ	464
Edestosaurus	466, 467, 468
Edestus	337
edwardsianus (Laornis)	531
effodiens (Hemicaulodon)	583
Effodientia	575
egertoni (Carcharias)	313
egertoni (Carcharhinus)	312
egertoni (Corax)	312
egertoni (Galeocerdo)	313
egertoni (Prionace)	313
egertoni (Prionodon)	313
Elachoceras	705
Elaphus	684, 685, 714
Elasmobranchii	262
Elasmognathus	628
Elasmosauridæ	457
Elasmosaurus	458
Elasmotheriina	645
Elasmotheriinae	645
elatum (Chalicotherium)	691
elatum (Titanotherium)	635
elatus (Diplacodon)	632
elatus (Moropus)	691
elatus (Titanops)	635
elatus (Triceratops)	498
elegans (Amia)	381
elegans (Anisacodon)	791
elegans (Asteroptychius)	330
elegans (Bunomeryx)	650

	Page.		Page.
elegans (Chomatodus)	280	Emydes	447
elegans (Cladodus)	268	Emydidæ	447
elegans (Cœlacanthus)	364	Emydides	447
elegans (Ctenacanthus)	327	emydinus (Cyclopidius)	670
elegans (Dictyocephalus)	423	emydinus (Thoracodus)	277
elegans (Elonichthys)	368	Emydoidæ	447
elegans (Eumys)	728	Emydosauria	508
elegans (Hypamia)	381	Emys	437, 444, 445, 447, 450
elegans (Ischypterus)	375	Enaliosauria	461
elegans (Lamna)	303, 305	encaustum (Osteoglossum)	393
elegans (Limnotherium)	791	encaustus (Dapedoglossus)	393
elegans (Merychys)	669	encaustus (Dysganus)	505
elegans (Microsyops)	791	encaustus (Phareodus)	393
elegans (Odontaspis)	303	Enchodidæ	388
elegans (Ornithoidichnites)	551	Enchodontidæ	388
elegans (Pediomys)	565	Enchodus	388, 390
elegans (Phyllodus)	401	enchodus (Anisodexis)	423
elegans (Plectropterna)	549	endlichii (Erismatopterus)	404
elegans (Rabdiolepis)	368	Enhydrocyon	769
elegans (Rhabdolepis)	368	Ennacodon	568
elegans (Semionotus)	375	Enneodon	568
elegans (Sterna)	535	ennisianus (Lepus)	736
elegans (Steropoides)	551	enodis (Taphrosphys)	458
elegans (Tridentipes)	551	ensidens (Pristis)	316
elegans (Trihamus)	553	ensidens (Saniwa)	475
elegantior (Steropoides)	551	ensifer (Cariacus)	684
elegantior (Tridentipes)	551, 552	ensifer (Cervus)	684
elegantius (Steropezoum)	551, 552	ensifer (Dama)	684
elegantulus (Orodus)	295	ensis (Notidanus)	301
elegantulus (Otolithus)	408	ensis (Xiphodolamia)	301
Elephantidæ	706	Entelodon	654, 655
elephantopus (Bathmodon)	698	entoconus (Conacodon)	696
elephantopus (Coryphodon)	698, 699	entoconus (Haploconus)	696
Elephas	708, 709, 712	Entomacodon	741
elevatus (Otolithus)	409	Entomodon	740, 755
ellangowensis (Anthracopus)	539	entoptychi (Amphicyon)	772
elliottii (Crocodylus)	512	Entoptychus	731
elliottii (Thecachampsia)	512	Eobasilidæ	701
Ellipsodon	606, 746	Eobasilæus	704, 706
elliptica (Palæaspis)	340	Eobasilidæ	701
ellipticus (Sandalodus)	289	Eobatrachus	425
Elliptonodon	473	eocænus (Edaphodon)	324
Elomeryx	652	eocænus (Ischyodus)	324
elongatus (Cladodus)	270	Eohippus	605, 608, 609, 610, 627
elongatus (Stenopterus)	291	Eohyidæ	650
Elonichthys	368	Eohyus	649, 651
Elotheriidæ	653	Eomeridæ	664
Elotheriinae	653	Eomeryx	664
Elotherium	650, 654, 656	Eosaurus	421
elytra (Chomatodus)	286	Eotherium	636
elytra (Helodus)	286	eous (Equus)	622
emarginatus (Diplacodon)	633	Epanorthidæ	565
emarginatus (Osteopygis)	441	Epanterias	483
Embalorhynchus	403	Ephippidæ	400
Embaphias	459	Ephippus	400
Embassus	570, 571	Epichriacus	744, 745
Embolomeri	410, 417	Epicordylus	421, 422
Embolophorus	431, 433	Epicyon	774
emmonsi (Aerodus)	299	Epihippus	611, 612
emmonsi (Hoplocetus)	596	Epimyceteri	777
emmonsi (Ontocetus)	596	Episcoposaurus	511
emmonsianus (Triænopus)	553	Eplacentalia	555
emmonsii (Sauroideichnites)	553	Eporeodon	665, 666, 667, 668
Empedias	427	eporrectus (Otolithus)	408
Empedocles	427	equiceps (Anchitherium)	613, 614
Empo	387, 795	equiceps (Meshippus)	614

	Page.		Page.
equiceps (Miohippus)	614	Eupelor	423
Equidae	608	Euphaneropidae	341
Equine	616	Euphancrops	341
equinum (Anchitherium)	615	euphractus (Glyptodon)	580
Equoidea	608	euphractus (Hoplophorus)	580
Equus	616, 617, 618, 620, 621	Euprotogonia	603, 746
équus (Hoplichnus)	546	Eurhipidura	519
Ereptodon	578	Eurinotus	376
Erethizon	733	Euryacodon	711
Erethizontidae	732	eurydinus (Thoracodus)	277
Erethizontinae	732	Eurydorus	510
Erinaceidae	741	Eurylepis	366, 367
Eriptychius	359	Eurynotus	376
Erisichthe	379	euryops (Merychyus)	669
Erisichtheidae	378	eurypygia (Cistudo)	449
Erismacanthus	335	eurypygia (Terrapene)	449
Erismatapterus	404	eurystylus (Equus)	620
erminius (Putorius)	768	eurystylus (Hipparion)	620
erosus (Osteopygis)	441	Eurythorax	416
eruciferus (Arotus)	356	Euselachii	274, 795
eruciferus (Ceratodus)	356	Eusmilus	778
Eryopidae	421	Eusthenopteron	361
Eryops	421, 422, 474	Eusuchia	511
Erythizon	733	Eusyodon	646
erythroliticus (Epicordylus)	421	Euthacanthus	274
erythroliticus (Eryops)	422	Eutheria	563, 571
erythrorhynchus (Pelecanus)	532	Eutatus	581
Eschatiidae	680	euthmeta (Emys)	447
Eschatus	680	evansi (Dorcatherium)	671
Eschrichtius	598, 599	evansi (Leptomeryx)	671
Esoces	398	evolutus (Anognmus)	393
Esocidae	398	evolutus (Osmeroides)	393
Esocini	398	exanthematica (Peplorhina)	364
Esox	398	exanthematicus (Conchiopsis)	364
Esthonychidae	715	excavatus (Ctenacanthus)	327
esulcatus (Leptomeryx)	671	excavatus (Dactylodus)	283
Esthonyx	715, 790	excavatus (Polyrhizodus)	283
etsagicus (Mioelænus)	649	excavatus (Rhynchodus)	323
etsagicus (Pantolestes)	649	excelsus (Brontosaurus)	485
etsagicus (Trigonolestes)	649	excelsus (Equus)	623
Eubradyx	579	excisum (Scapherpeton)	424
Eubrontes	539, 543	excreccicornis (Lefalophodon)	706
Eucastor	722	exiguus (Cladodus)	268
Euchelonia	435	exilis (Cladodus)	268
Eucherus	660	exilis (Iguanavus)	474
Euelastes	441, 442	eximia (Prosinopa)	788
Eucrotaphus	663, 665, 666, 667, 668	eximia (Sinopa)	788
Euctenius	337	eximium (Poëbrotherium)	675
Euelephas	712, 713	eximius (Actobatis)	320
Euganoidei	374	eximius (Hyrachyus)	639
euglypha (Emys)	417	eximius (Mesobatis)	320
euglyphæus (Cladodus)	268	Exocampe	544
Eugnathidae	378	exoletum (Anchitherium)	614
euhypodon (Mastodon)	710	exoletus (Mesohippus)	614
euhypodon (Mammut)	710	exoletus (Miohippus)	614
euhypodon (Mastodon)	710	exornatus (Deltodopsis)	291
euhypodon (Tetrabelodon)	710	Exostinus	476
Eulichthyes	338	expansa (Megaptera)	599
Eulamia	312	expansum (Brontozoum)	543
Eumetopias	783	expansum (Cetotherium)	599
Eumylodus	324	expansus (Deltoptychius)	294
Eumys	726, 727	expansus (Eschrichtius)	599
Eunemacanthus	329	expansus (Eubrontes)	543
Euornithes	523	expansus (Ornithoidichnites)	543
Eupachemys	448, 451	expansus (Periplectrodon)	287
Eupalamopus	544	expansus (Siphonocetus)	599

	Page.		Page.
expansus (Tarsodactylus)	552	ferox (Cladodus)	268
explanatus (Dryptosaurus)	488	ferox (Clanodon)	747
explanatus (Laelaps)	488	ferox (Cœlosteus)	361
explanatus (Mesodmodus)	297	ferox (Coloreodon)	663
exsculptus (Mesodmodus)	297	ferox (Didelphodon)	566
exsertum (Brontozoum)	543	ferox (Didelphops)	566
exsertus (Eubrontes)	543	ferox (Enechodus)	389
extenta (Oxyrhina)	306	ferox (Hyposaurus)	516
extinctus (Sicarius)	278	ferox (Labrosaurus)	490
eyra (Felis)	782	ferox (Limnofelis)	757
F.		ferox (Mioclenus)	747
faba (Pycnodus)	373	ferox (Oxyclenus)	747
faber (Chætodipterus)	400	ferox (Pachyrhizodus)	388
faber (Chætodon)	400	ferox (Patriofelis)	757
faciatus (Teniodus)	292	ferox (Priacodon)	567
falcatus (Corax)	309, 311	ferox (Ptyctodus)	323
falcatus (Galeocerdo)	309	ferox (Saurocephalus)	386
falcatus (Heterodon)	309	ferox (Saurodon)	386
falcatus (Physonemus)	333	ferox (Sphenacodon)	434
falcatus (Selenichnus)	551	ferox (Temnocyon)	773
Falciformes	535	ferox (Tinodon)	567
Falcones	535	ferox (Triconodon)	567
Falconidæ	535	ferox (Ursus)	763
falculus (Dryptosaurus)	488	ferricolus (Eryops)	422
falculus (Laelaps)	488	ferricolus (Parioxys)	422
fallax (Ctenacanthus)	327	ferruminatus (Tomiopsis)	581
fallax (Triacodon)	753	Fiber	729
fallax (Washakius)	787	fiber (Castor)	721
fasciatus (Deltodus)	292	fieldi (Hyphepus)	546
fasciatus (Tæniodus)	292	filholianus (Carcinodon)	762
fasciular (Thyrsideum)	416	filholianus (Mioclenus)	762
fastigiatus (Crocodylus)	512	filiferus (Conchiopsis)	364
fastigiatus (Myliobatis)	320	filosus (Holoptychius)	358
fastigiatus (Orodus)	295	fimbriatus (Harpacanthus)	336
fastigiatus (Thecachampsæ)	512	fimbriatus (Tristychius)	336
fatalis (Felis)	780	firma (Emys)	445
fatalis (Machærodus)	780	firmus (Adocus)	445
fatalis (Machærodus)	781	firmus (Agomphus)	445
fatalis (Smilodon)	780	firmus (Emys)	445
fatalis (Trucifelis)	780	fissidens (Bathyopsis)	700
favirostris (Anogmius)	393	fissidens (Catopsalis)	563
favirostris (Osmeroides)	393	fissidens (Miolabis)	677
favosum (Scapherpeton)	424	fissidens (Polymastodon)	563
favosus (Ceratodus)	356	fissidens (Procamelus)	677
favosus (Conodectes)	430	fissidens (Uintatherium)	700
fecundus (Edaphodon)	324	Fissipedia	762
fecundus (Ischyodus)	324	Fissodus	277
feliceps (Brachymeryx)	671	fissus (Empedias)	427
Felidæ	777	fissus (Monoclonius)	500
felina (Deinictis)	780	flabellatus (Holoptychius)	358
felina (Dinictis)	780	flabellatus (Sterrholophus)	499
Felinæ	781	flabellatus (Triceratops)	499
felinus (Daphænus)	772	flabelliformis (Ctenodus)	351
felinus (Daphænus)	772	flabelliformis (Dipterus)	351
Felis	777, 782, 783	flabellum (Desmodius)	297
felix (Diplosaurus)	516	flagellator (Zarbachius)	592
felix (Goniopholis)	516	flagrans (Opisthotomus)	792
felix (Lestosaurus)	470	flectidens (Uranoplosus)	373
felix (Platycarpus)	470	fleischeri (Ctenodus)	351
Feræ	743	fleischeri (Dipterus)	351
ferox (Ælurodon)	774	flexiloquus (Antipus)	540
ferox (Agriochærus)	663	floridana (Neotoma)	727
ferox (Alosaurus)	490	floridanum (Mammut)	710
ferox (Bison)	689	floridanus (Drepanodon)	781
ferox (Carcharodon)	308	floridanus (Glyptodon)	581
		floridanus (Machærodus)	781

	Page.		Page.
floridanus (Machairodus)	781	fraterculus (Gavialis)	515
floridanus (Mastodon)	710	fraterculus (Hyposaurus)	515
floridanus (Smilodon)	781	fraternus (Baptosaurus)	468
floridanus (Tetrabelodon)	710	fraternus (Equus)	623, 624
floriferus (Orthodactylus)	547	fraternus (Halisaurus)	468
flowerianus (Mioclenus)	603	fraternus (Mysops)	725
flowerianus (Tetracænodon)	603	fraternus (Syllophodus)	725
fodiens (Tillotherium)	716	fraternus (Tomolabis)	623
foliarum (Trichophanes)	404	Fringillidæ	537
foliatus (Catopsalis)	562	fritillus (Embolophorus)	433
foliatus (Polymastodon)	562	Fritschia	413
foliatus (Sagenodus)	354	frontata (Mephitis)	766
fontinalis (Limnohyops)	630	frugivorum (Tomotherium)	789
fontinalis (Limnohyus)	630	frugivorus (Pelycodus)	789
fontinalis (Palæosyops)	630	fugax (Didelphis)	571
foordii (Eusthenopteron)	361	fugax (Didelphys)	571
forcipata (Anoplonassa)	597	fugax (Herpetotherium)	571
forcipata (Oxyæna)	757	fugax (Peratherium)	571
forfex (Leptomylus)	325	fulciatus (Mosasaurus)	465
formosum (Aciprion)	477	Fulica	528
formosus (Cimolomys)	560	Fulcaria	526
formosus (Ctenacanthus)	327	fulcoides (Ornithichnites)	550
formosus (Grallator)	545	fulcoides (Ornithoidichnites)	550
formosus (Halodon)	560	Fulicopus	544, 550
formosus (Hipposyus)	793	Fuligula	530
formosus (Troödon)	490	fulleri (Cladodus)	268
forsteri (Sterna)	525	fultus (Ischypterus)	375
fortis (Allacodon)	557	fultus (Palæoniscus)	375
fortis (Alodon)	557	fultus (Semionotus)	375
fortis (Cervus)	685	fundaminis (Deltatherium)	751
fortis (Deinictis)	780	furcatum (Tinoceras)	706
fortis (Dinictis)	780	furcatum (Uintatherium)	706
fossatus (Ctenodus)	354	furcatus (Antiæodon)	793
fossatus (Metamosaurus)	434	furcatus (Cosoryx)	683
fossatus (Sagenodus)	354	furcatus (Dicrocerus)	683
fossidens (Mephitis)	766	furcatus (Eobasilæus)	706
fossiger (Aceratherium)	647	furcatus (Merycodus)	683
fossiger (Aphelops)	646	furcatus (Loxolophodon)	706
fossiger (Teleoceras)	646	furcatus (Procervulus)	683
fossilis (Dicotyles)	659	furcatus (Sarcoclemur)	793
fossilis (Equus)	622	furciarhinatus (Ctenacanthus)	296, 327
fossilis (Manatus)	583, 584	fuscus (Adelonycteris)	742
fossulatus (Merychippus)	616	fuscus (Vesperus)	742
fossulatus (Pliohippus)	616	fuscus (Vespertilio)	742
fossulatus (Protohippus)	616	fuscus (Vesperugo)	742
foulkii (Hadrosaurus)	503	fusiforme (Amyzon)	395
foulkii (Trachodon)	503	fuzax (Herpetotherium)	571
foveatus (Colosteus)	419	fyleri (Cladodus)	272
foveatus (Sauropseura)	419	fyleri (Cladoselache)	272
foveatus (Trionyx)	454		
fractus (Plastomenus)	452		
fragilis (Acantholepis)	332		
fragilis (Allosaurus)	489		
fragilis (Cœlurus)	486, 493		
fragilis (Eczematolepis)	332		
fragilis (Labrosaurus)	489		
fragilis (Meniscoëssus)	561		
fragilis (Oracanthus)	332		
fragilis (Selenacodon)	561		
fragillimus (Amphicœlias)	486		
fragillissimus (Amphicœlias)	486, 493		
frangens (Palæomytus)	323		
frangens (Rhynchodus)	323		
fraserianus (Palæosaurus)	492		
fraserianus (Thecodontosaurus)	492		

G.

gabbii (Delphinapterus)	591
gabbii (Priscodelphinus)	591
gabbii (Tretosphyx)	591
galeatum (Tinoceras)	704
galeatum (Uintatherium)	704
galeatus (Eobasilæus)	704
galeatus (Loxolophodon)	704
Galecyne	771
Galei	301, 310
Galeide	310
Galeocerdo	309, 311, 313
Galeoidea	301
Galeorhinide	310
Galeorhinine	311

	Page.		Page.
Galeorhinus	312	Gephyura	398
Galera	766, 767	Geranomorphæ	526, 527
Galeus	309, 311, 312	Gerrhonotidæ	474
galeus (Squalus)	312	Getalodus	278
galeus (Triceratops)	498	gibbarcus (Alburnops)	395
Galictis	766, 767	gibbarcus (Myloleucus)	395
Gallidæ	533	gibbarcus (Rutilus)	395
Galliformes	533	gibberulus (Helodus)	286
gallinaceus (Ornithopus)	551	gibberulus (Lophodus)	286
Gallinæ	533	gibbesii (Aprionodon)	313
Gallinuloides	535	gibbesii (Carcharias)	313
gallinuloides (Anomœpus)	539	gibbesii (Carcharhinus)	306, 313
Gallinuloididæ	535	gibbesii (Saurocetus)	588
gallinuloides (Ornithichnites)	539	gibbesii (Sphyrna)	314
gallopavo (Meleagris)	534	gibbesii (Zeuglodon)	588
Gamphacanthus	332	gibbiceps (Anthracotherium)	652
Gampsacanthus	336	gibbiceps (Heptacodon)	652
Ganalodus	360	gibbidents (Thecodontosaurus)	492
ganei (Heterodontosuchus)	515	gibbosus (Amacanthus)	329
Ganocephala	447	gibbosus (Diplodus)	265, 266
Ganocephali	447, 449	gibbosus (Dissodus)	266
Ganodonta	512	gibbosus (Dittodus)	266
Ganoidei	338, 356	gibbosus (Helodus)	295
Ganoides	357	gibbosus (Homacanthus)	329
Ganorhynchide	392	gibbosus (Orodus)	295
Ganorhynchus	352	gibbus (Diplacanthus)	274
Garialis	515	gibbus (Helodus)	286
garmani (Notomorpha)	448	gibsoni (Cricotus)	421
gaskillii (Edaphodon)	324	Gigadipus	545
gaskillii (Ischyodus)	324	Gigandipus	545
Gasterosteiformes	396	gigantea (Pachyrhina)	749
Gasterosteidæ	397	giganteum (Brontozoum)	543
Gasterosteus	397	giganteum (Diatryma)	522
Gastornis	522	giganteum (Gastornis)	522
Gastornithes	522	giganteum (Mastodon)	707
Gastornithidæ	522	giganteum (Palæotherium)	636
Gastrodus	360	giganteus (Amblyonyx)	544
Gastrolepidoti	421	giganteus (Edestus)	337
gaudrianus (Triisodon)	748	giganteus (Equus)	623
gaudrianus (Goniacodon)	748	giganteus (Eubrontes)	543
gaudryi (Agriochoerus)	663	giganteus (Fulicopus)	544
gaudryi (Artionyx)	663	giganteus (Holoptychius)	358
gaudryi (Coloreodon)	663	giganteus (Manatus)	584
Gaviæ	523	giganteus (Mastodon)	707, 714
Gavialide	515	giganteus (Menodus)	636
Gavialis	515	giganteus (Ornithichnites)	543
Geisacanthus	330	giganteus (Ornithoidichnites)	543
geismarianus (Canis)	771	giganteus (Plesiornis)	550
geismarianus (Cynodictis)	771	Gigantitherium	545
geismarianus (Galecyne)	771	gigas (Alopecias)	305
geismarianus (Nothocyon)	771	gigas (Archæobatis)	285
gemma (Otolithus)	408	gigas (Atlantochelys)	140
gemmatus (Ctenacanthus)	327	gigas (Brontotherium)	635
gemmatus (Drepanacanthus)	334	gigas (Clepsydrus)	432
gemmatus (Physonemus)	334	gigas (Dimetrodon)	432
gemmatus (Xystracanthus)	334	gigas (Ephippus)	400
gemmifer (Blastomeryx)	682	gigas (Hydrodamalis)	584
gemmifer (Cosoryx)	682	gigas (Ischypterus)	375
gemmifer (Dicrocerus)	682	gigas (Manospondylus)	500
gemmifer (Merycodus)	682	gigas (Morotherium)	580
gentryi (Enchodus)	389	gigas (Myliobatis)	320
gentryi (Phasganodus)	389	gigas (Physonemus)	333
Geolabis	739, 741	gigas (Polemarchus)	550
Geomyidæ	730	gigas (Protosphyrena)	379
Geomys	730	gigas (Protostega)	440
Geosaurus	471	gigas (Rhytina)	584

	Page.		Page.
gigas (Semionotus).....	375	gouldii (Dinichthys).....	346
gigas (Taurus).....	689	gouldii (Plesiosaurus).....	456
gigas (Titanotherium).....	635	gouldii (Ponerichthys).....	346
gilbertii (Testudo).....	451	gracile (Anchitherium).....	612
gillianus (Anisonechus).....	695	gracile (Miothen).....	571
gillianus (Haploconus).....	695	gracilior (Anisichnus).....	541
Gillieus.....	386	gracilior (Anisopus).....	541
gillii (Paleotetrix).....	531	gracilior (Batrachopus).....	541
Ginglymodi.....	374, 376	gracilior (Harpedactylus).....	545
Ginglymostoma.....	310	gracilior (Ornithopus).....	551
Ginglymostomidae.....	310	gracilior (Ornithoidichnites).....	551
Ginglymostominae.....	310	gracilior (Sillimanius).....	551
Ginglystomoidae.....	310	gracillima (Platypterna).....	549
Girtyi (Cladodus).....	268	gracillimus (Acondylacanthus).....	329
Gisacanthus.....	330	gracillimus (Anomepus).....	539
glaber (Clastes).....	377	gracillimus (Brontozoum).....	539
glaber (Lepistosteus).....	377	gracillimus (Chomatodus).....	276
glaber (Otolithus).....	408	gracillimus (Ctenacanthus).....	329
glacialis (Harelda).....	530	gracillimus (Eubrontes).....	539
gladiolus (Cimolichthys).....	389	gracillimus (Grallator).....	539
gladiolus (Enchodus).....	389	gracillimus (Ornithoidichnites).....	539
gladiolus (Phasganodus).....	389	gracillimus (Petalodus).....	276
gladius (Pelecoperus).....	379	gracillimus (Tanaodus).....	276
gladius (Portheus).....	379	gracilipes (Macropterna).....	548
gladius (Protosphyraena).....	379	gracilipes (Palamopus).....	548
gladius (Torosaurus).....	499	gracilis (Acondylacanthus).....	329
glandiferus (Lestosaurus).....	470	gracilis (Aletornis).....	527
glandiferus (Liodon).....	470	gracilis (Amia).....	381
glandiferus (Platecarpus).....	470	gracilis (Amphicyon).....	771
Glaucionetta.....	530	gracilis (Anisichnus).....	541
Glire.....	717	gracilis (Anisopus).....	541
gliriformis (Ectoganus).....	575	gracilis (Antiodon).....	279
Glossochelys.....	441	gracilis (Asteroptychius).....	330
Glossotherium.....	579	gracilis (Batrachopus).....	541
glottoides (Myliobatis).....	320	gracilis (Catopterus).....	370
Glymmatacanthus.....	331	gracilis (Cimolomys).....	559, 560
Glyphis.....	312, 313	gracilis (Cladodus).....	268
Glyptaspis.....	349	gracilis (Climatus).....	329
Glyptemys.....	449	gracilis (Culurus).....	493
Glyptoderma.....	476	gracilis (Daphnoides).....	771
Glyptodon.....	580, 581, 582	gracilis (Dinichthys).....	346
glyptodon (Holops).....	516	gracilis (Diplodus).....	266
glyptodon (Thoracosaurus).....	516	gracilis (Dissodus).....	266
Glyptodontes.....	580	gracilis (Dittodus).....	266
Glyptodontia.....	580	gracilis (Domina).....	571
Glyptodontidae.....	580	gracilis (Dryolestes).....	569
Glyptolepis.....	358, 359	gracilis (Ephippus).....	612
Glyptopomus.....	362	gracilis (Grallator).....	545
Glyptops.....	437	gracilis (Harpedactylus).....	545
Glyptosauridae.....	474	gracilis (Hemiacodon).....	794
Glyptosaurus.....	475	gracilis (Hesperornis).....	521
glyptus (Psammodus).....	284	gracilis (Homacanthus).....	329
Gnathorhiza.....	355	gracilis (Hyopsodus).....	790
godmani (Tetracaulodon).....	709	gracilis (Hypsodus).....	790
gomphodus (Nimravus).....	781	gracilis (Lamna).....	303, 310
gomphoides (Cladodus).....	268	gracilis (Laosaurus).....	501
Gomphotherium.....	676	gracilis (Leptocheirus).....	657
Gonatodus.....	365	gracilis (Leptocodon).....	672
Goniacodon.....	748	gracilis (Lestosaurus).....	470
Goniodus.....	287, 315	gracilis (Machairodus).....	778
Goniopholidæ.....	516	gracilis (Merycodesmus).....	672
Goniopholis.....	516	gracilis (Merycododon).....	666
Goniopoda.....	487	gracilis (Mesohippus).....	612
Gonorhynchidæ.....	392	gracilis (Microsops).....	791, 792
goodeanus (Ichthyodectes).....	345	gracilis (Notharctus).....	790
Gorgonichthys.....	345, 346	gracilis (Nyctodactylus).....	508

	Page.		Page.
gracilis (Nyetosaurus)	508	grandis (Thinosaurus)	476
gracilis (Odontaspis)	303	grandis (Thoracosaurus)	515
gracilis (Oreodon)	666	grandis (Titanophis)	479
gracilis (Oreosaurus)	475	grandis (Triacodon)	753
gracilis (Orohippus)	612	granulata (Eurylepis)	366
gracilis (Orthacanthus)	264	granulata (Mecolepis)	366
gracilis (Paleoniscus)	367	granulatus (Holotyphius)	358
gracilis (Petalodus)	279	granulatus (Oracanthus)	332
gracilis (Platecarpus)	470	granulosus (Peltosaurus)	457
gracilis (Plectropterna)	549	Graphiodon	590
gracilis (Pleuracanthus)	264	gratum (Hipparion)	620
gracilis (Pliohippus)	618	gratum (Hippotherium)	620
gracilis (Ponerichthys)	346	Gravignada	575
gracilis (Procamelus)	677, 678	gravis (Emys)	448
gracilis (Protamia)	381	gravis (Notomorpha)	448
gracilis (Protocamelus)	677	greeni (Palæomylus)	323
gracilis (Pteranodon)	508	greeni (Rhyechodus)	323
gracilis (Ptilodus)	560	gregarius (Canis)	771
gracilis (Redfieldius)	370	gregarius (Cynodietis)	771
gracilis (Rhadinichthys)	367	gregarius (Galecynus)	771
gracilis (Sauroidechnites)	545	grinnellii (Crocodylus)	512
gracilis (Scapanorhynchus)	303	grœnlandica (Phoca)	785
gracilis (Scylliorhinus)	310	grœnlandicus (Pagophilus)	785
gracilis (Scyllium)	310	grœnlandicus (Rangifer)	686
gracilis (Smilodon)	778	grossiplicata (Janassa)	276
gracilis (Stylacodon)	569	grossiplicatus (Tanaodus)	276
gracilis (Typopus)	553	grossipunctatus (Leiodus)	296
gracilis (Viverravus)	754	Grues	527
gracilis (Xestops)	475	Gruidae	527
gracilis (Zetodon)	695	Gruiformes	527
Graculavus	519, 520, 533	Gruinae	527
Graculus	533	Gruioidea	527
gradata (Domnina)	741	Gruioideæ	527
gradatus (Castor)	722	Grus	527
gradatus (Steneofiber)	722	Gryphodobatis	316
gradocostatus (Ctenacanthus)	327	Grypodon	408
Gralla	526	gryphus (Crocodylus)	512
Grallator	529, 545	güntheri (Ceratodus)	356
grallipes (Pteropelyx)	503	Gulo	768
grandæva (Chelone)	443	gulo (Plesiosaurus)	456
grandæva (Chelonia)	443	gurleiana (Janassa)	276
grandævus (Delphinapterus)	591	gurleiana (Strigilina)	276
grandævus (Oligosimus)	459	gurleianus (Sagenodus)	354, 355
grandævus (Priscodelphinus)	591	gurleyana (Janassa)	276
grandævus (Puppigerus)	443	gurleyanus (Ctenodus)	354
grandævus (Tretosphys)	591	gurleyanus (Sagenodus)	354
grandiceps (Amphibamus)	411	gurleyi (Ctenacanthus)	327
grande (Tinoceras)	704	guttatus (Trionyx)	454
grandis (Apatosaurus)	483	guyotianus (Agriocheirus)	663
grandis (Brimosaurus)	459	guyotianus (Hyopotamus)	663
grandis (Chonespondylus)	463	guyotianus (Merycopater)	663
grandis (Cimoliasaurus)	459	guyotii (Desmatotherium)	625
grandis (Cladodus)	268	guyotii (Heleates)	625
grandis (Deltodus)	292	Gyapetidae	535
grandis (Dinophis)	479	Gymnodontes	408
grandis (Discosaurus)	459	Gymnoptychus	720, 725
grandis (Eryops)	434	Gyracanthus	335
grandis (Hemipsalodon)	759	gyrinoides (Coeytinus)	416
grandis (Ichthyosaurus)	463	Gyrolepis	359
grandis (Loxolophodon)	705	Gyrosteus	371
grandis (Morosaurus)	483		
grandis (Ophiacodon)	434		
grandis (Ornithomimus)	494		
grandis (Palæophis)	479		
grandis (Psammodus)	284		
grandis (Sandalodus)	289		

H.

hadriana (Testudo)	421
Hadrianus	450
Hadrodus	373
Hadrohyus	671

	Page.		Page.
Hadrosauridae.....	503	hastata (Dasyatis).....	319
Hadrosaurus.....	500, 502, 503, 504	hastata (Oxyrhina).....	306
Halecomorphi.....	378, 380	hastata (Trygon).....	319
Halicorida.....	582, 584	hastilis (Oxyrhina).....	306
Halicoridae.....	582	hatcheri (Protolambda).....	692
halidanus (Dinophis).....	479	hatcheri (Protoptychus).....	730
halidanus (Palaephis).....	479	hatcheri (Rhineura).....	476
Halisaurus.....	468	Hatteria.....	460
Halitheriidae.....	582	hawkinsii (Delphinapterus).....	591
Halitherium.....	582	haydeni (Elurodon).....	774
halli (Holoptychius).....	358	haydeni (Amphicyon).....	774
halli (Poebrotherium).....	676	haydeni (Canis).....	774
nalli (Protomeryx).....	676	haydeni (Emys).....	448
Hallopidæ.....	194	haydeni (Epicyon).....	774
Hallopoda.....	494	haydeni (Grus).....	527
Hallopodiidae.....	494	haydeni (Lepidotus).....	377
Hallopus.....	494	haydeni (Leptictis).....	739
halmodeus (Cocosteus).....	346	haydeni (Palaeolagus).....	735, 736
halmodeus (Dinichthys).....	346	haydenianus (Didymictis).....	754
halocyon (Enchodus).....	389	haydenianus (Dysganus).....	505
Halodon.....	560, 561	haydenianus (Viverravus).....	754
halophilus (Trionyx).....	454	haysii (Elasmognathus).....	628
hamatus (Anticheiropus).....	539	haysii (Tapirus).....	628
hamatus (Coryphodon).....	698, 700	haysii (Tetracaulodon).....	709
hamatus (Ichthyodectes).....	385	hazenianus (Cryptosaurus).....	488
hamatus (Labidosaurus).....	429	hazenianus (Laelaps).....	488
hamatus (Lambdodus).....	271	hebraica (Baena).....	438
hamatus (Pariotichus).....	429	heckmani (Acherontemys).....	446
hamulus (Lambdodus).....	271	Hectocampe.....	544
Haplacodon.....	653	Hedronchus.....	326
Haplistia.....	352	heilprinianus (Goniacodon).....	748
haplocerus (Episcoposaurus).....	511	heilprinianus (Mioclenus).....	748
Haploconus.....	694, 695, 696	heilprinianus (Trisodon).....	748
haplodon (Aretodus).....	763	heinrichii (Edestus).....	337
haplodon (Tremaretos).....	763	Helagrus.....	181
haplodon (Ursus).....	763	Helaletes.....	625, 627
Haplotetis.....	366	Helaletidae.....	624
Haplomi.....	398	Helalotinae.....	624
hardingi (Hylapus).....	546	Helcura.....	546
hardingi (Rhizodus).....	360	Heleothepta.....	410
hardingi (Strepsodus).....	360	Hellobatis.....	319
Harelda.....	530	Heliodus.....	352
harlani (Basilosaurus).....	587	Heliscomys.....	729
harlani (Bottosaurus).....	514, 615	heloceras (Symborodon).....	636
harlani (Crocodylus).....	514	heloceras (Titanotherium).....	636
harlani (Hydrarchus).....	587	helocerus (Megaceratops).....	636
harlani (Megalonyx).....	579	Helodectes.....	429
harlani (Mylodon).....	579	Helodontinae.....	284
harlani (Priscodelphinus).....	591	Helodus.....	286, 293, 295
harlani (Zeuglodon).....	587	Helohippus.....	611
Harlanus.....	688, 690	Helohyda.....	650
Harpacanthus.....	336	Helohyus.....	604, 650
Harpacodus.....	282	Helotherium.....	611, 612
Harpagomotherium.....	408	Hemiacis.....	766
Harpalodon.....	761	Hemiacodon.....	787, 791
Harpodaetylus.....	545, 549	Hemibranchii.....	396
harpylgia (Ornithochirus).....	508	Hemicaulodon.....	583
harpylgia (Pterodaetylus).....	508	hemiconus (Phenacodus).....	604
harrisoni (Ctenacanthus).....	328	Hemietenodus.....	554
hartshornianus (Amphicyon).....	772	Hemiganidae.....	573
hartshornianus (Canis).....	772, 773	Hemiganus.....	573, 574
hartshornianus (Daphenus).....	772	Hemipristis.....	313
hartwelli (Galeocerdo).....	311	Hemipsalodon.....	759
hassie (Galeocerdo).....	311	Hemiptychodus.....	317
hastalis (Isurus).....	306	hemispherica (Emys).....	450
hastalis (Oxyrhina).....	304, 306	hemispherica (Testudo).....	450

	Page.		Page.
Hemipristis.....	313	Hexanchoida.....	300
Hemithlaus.....	607, 695	Hexanchus.....	300
Hemitrypus.....	424	Hexodon.....	573
Heptacodon.....	651, 652	hians (Loxolophodon).....	705
Heptanchus.....	300	hians (Paramys).....	723
Heptodon.....	625	hians (Plesiartomys).....	724
Heptanchias.....	300	hians (Prototomus).....	752
Herbivora.....	601	hians (Pseudotomus).....	723
Herodii.....	531	hians (Sinopa).....	752
Herodiones.....	531	hians (Stypolophus).....	752
Herpetotherium.....	570, 571	hians (Tinoceras).....	705
hertzeri (Cladodus).....	268	hians (Trichophanes).....	404
hertzeri (Dinichthys).....	346, 347	hians (Uintatherium).....	705
hertzeri (Goniodus).....	287	hiatidens (Anaptogonia).....	728
hertzeri (Ponerichthys).....	346	hiatidens (Arvicola).....	728
hertzeri (Xenodus).....	287	hiatidens (Microtus).....	728
hesperium (Diceratherium).....	644	hibberti (Megalichthys).....	362
hesperius (Aphelops).....	644	hieroglyphus (Arotus).....	356
hesperius (Chanohyus).....	659	hieroglyphus (Ceratodus).....	356
hesperius (Dicotyles).....	659	hildrethi (Listracanthus).....	336
hesperius (Hypetragalus).....	675	hilli (Pseudemys).....	449
hesperius (Rhinceros).....	644	hillianus (Felis).....	782
hesperius (Tayassu).....	659	Hipparion.....	616, 619, 622, 795
Hesperocyon.....	771	hipparionyx (Phyllodus).....	401
Hesperomyia.....	726	Hippidæ.....	608
Hesperomys.....	726, 727	Hippidion.....	618, 619
Hesperornidæ.....	521	Hippidium.....	618, 619
Hesperornis.....	521	Hippodon.....	619, 621
Hesperornithes.....	520	hippodus (Allomys).....	718
Hesperornithidæ.....	521	hippodus (Meniscomys).....	718
Hesperornoidea.....	521	hippodus (Protogaulus).....	718
hesperus (Desmostylus).....	583	Hippoidea.....	608
hesterna (Auchenia).....	679	Hippopotamus.....	707, 708
hesternus (Camelops).....	679	Hipposys.....	611, 793
hesternus (Holomeniscus).....	679	Hippotherida.....	608
Heteracanthus.....	312	Hippotherium.....	619, 620, 621, 622
Heterocerei.....	365	Histiophoridae.....	402
Heterodon.....	309	Histiophorus.....	402
heteroclitus (Ancyropus).....	538	Holacanthodes.....	273
heteroclitus (Cetophis).....	593	Holaspis.....	340
heteroclitus (Cricotus).....	421	holbelli (Colymbus).....	523
heteroclitus (Sauridichnites).....	538	Holcodus.....	440, 465, 466, 469, 470, 471, 516
heterodactylum (Chirotherium).....	542	holmesii (Colophonodon).....	589
heterodactylus (Thenaropus).....	542	holmesii (Myliobatis).....	320
heterodon (Alligator).....	513	holmesii (Phocodon).....	589
heterodon (Carcharias).....	307	holmesii (Squalodon).....	589
heterodon (Carcharodon).....	307	Holocephala.....	322
heterodon (Corax).....	309	Holocephali.....	322
heterodon (Crocodylus).....	513	Holomeniscus.....	679
heterodon (Cyclopidius).....	670	Holonema.....	350
heterodon (Pitheciestes).....	670	Holops.....	515
Heterodontidæ.....	298	Holoptychiidae.....	358
Heterodontoidæ.....	298	Holoptychius.....	344, 358, 359, 361
Heterodontoida.....	285	Holosaurus.....	471
Heterodontosuchus.....	515	Holostei.....	374
Heterodontus.....	299	holyokensis (Apatichnus).....	540
heterodontus (Procamelus).....	677	Homacanthus.....	329
heterodontus (Protolabis).....	677	Homacodon.....	648, 649
heteroglyptus (Trionyx).....	454	Homacodontidæ.....	648, 649, 650
heterolophus (Ctenodus).....	354	homalorhamphus (Histiophorus).....	402
heterolophus (Sagenodus).....	354	homalorhamphus (Istiophorus).....	402
heteropleurus (Hemipristis).....	313	Homocamelus.....	677, 678
Heterostraci.....	339	Homogalax.....	627
hexagonata (Testudo).....	451	Homocosaurus.....	459
hexagonus (Piptomerus).....	457	Homorhophus.....	446
Hexanchidae.....	300	Homorophus.....	446

	Page.		Page.
homunculus (Anaptomorphus)	787	Hyænodontini	758
homunculus (Omomys)	787	hyænoides (Elurodon)	774
hopei (Lamna)	302, 313	hyattianus (Chriacus)	745
hopei (Odontaspis)	302	hyattianus (Loxolophus)	745
hopkinsi (Onychodus)	363	hyattianus (Protochriacus)	745
Hoplichnus	546	Hybemys	448
Hoploceetus	595, 596	Hybeladodus	271
Hoplonychus	329	Hybodontidæ	267, 298
Hoplophoneus	778, 780	Hybodus	299
Hoplophoridae	580	hybridus (Merycoidodon)	666
Hoplophorus	580	hybridus (Oreodon)	666
Hoplopleuridæ	396	hybridus (Petalodus)	278
Hoplopygus	363	Hydrarchos	586, 587
hornei (Cladodus)	270	Hydrarchus	586, 587
horridum (Holonema)	350	hydrarchus (Zeuglodon)	587
horridus (Aublysodon)	489	Hydrargos	586
horridus (Ceratops)	498	hydrochæris (Hydrochærus)	784
horridus (Crotalus)	481	Hydrochelidon	525
horridus (Deinodon)	488, 489	Hydrochærus	734
horridus (Dinodon)	488, 489	Hydrodamalidæ	584
horridus (Episcoposaurus)	511	Hydrodamalis	584
horridus (Hyænodon)	758	hyemalis (Clangula)	580
horridus (Mosasaurus)	466	hyemalis (Harelda)	580
horridus (Triceratops)	498	hylaetor (Cynodiectis)	771
horrificus (Diplotomodon)	473	Hylerpeton	413
horrificus (Tomodon)	473	Hylerpetum	413
hortonensis (Acrolepis)	369	Hylonomidæ	411, 412
hospes (Otolithus)	408	Hylonomus	412, 413
hudsonianus (Zapus)	732	Hyloplesion	412
hudsonius (Dipus)	732	Hyloplesionidæ	412
hudsonius (Jaculus)	732	Hylopus	546
hudsonius (Meriones)	732	Hyodontæ	692
hudsonius (Zapus)	732	Hyoganoidæ	574
huerfanensis (Auchenia)	679	hyognathum (Telmatherium)	682
huerfanensis (Lama)	679	hyognathus (Palæosyops)	682
huerfanensis (Oxyæna)	757	Hyomeryx	665
humboldtii (Mammut)	710	Hypomata	356
humboldtii (Mastodon)	710	Hypotamidæ	651
humboldtii (Pygopterus)	367	Hypotamius	652, 653
humboldtii (Chlamydothierium)	581	Hyops	660
humboldtii (Chlamytherium)	581	Hyopsodidæ	788
humboldtii (Dibelodon)	711	Hyopsodontidæ	788
humboldtii (Mastodon)	710, 712	Hyopsodus	606, 789, 790, 793
humerosum (Elotherium)	655	Hyotheriinae	656
humerosus (Boöchærus)	655	Hyotherium	656, 658
humilis (Acrodus)	299	Hypamia	380, 381
humilis (Bottosaurus)	513	hypantricus (Cricotus)	421
humilis (Clupea)	391	hyperborea (Chen)	530
humilis (Crocodylus)	513	hyperboreus (Lobipes)	527
humilis (Diplomystus)	391	Hypertragulidæ	674
humilis (Limnonyx)	630	Hypertragulus	674
humilis (Palæosyops)	630	Hyphasma	416
humphresiana (Pliauchenia)	680	Hyphepus	546
humphreysiana (Pliauchenia)	680	Hypisodus	672
hunii (Didelphis)	571	hypoceras (Cottus)	406
hunii (Didelphys)	571	hypoceras (Brontotherium)	635
hunii (Herpetotherium)	571	hypoceras (Symbolodon)	635
hunii (Peratherium)	571	hypoceras (Titanotherium)	635
huttoni (Lamna)	303	Hypocetus	596
huxleyi (Tuditanus)	415	Hypohippus	615
Hyæna	776	Hypomycteri	762, 769
Hyænidæ	776	Hypopnons	429
Hyænoecyon	770	Hyposaurus	515, 516
Hyænodon	758	Hypostomata	339
Hyænodontidæ	756, 758	Hypotemnodon	773
Hyænodontinæ	758	Hypotremi	315

	Page.		Page.
hypsacantha (Priscacara)	401	Iguanodontoidea	500
hypsibata (Branta)	530	Iguanoidea	474
hypsibates (Bernicla)	530	imbricarius (Anisodexis)	423
hypsibatus (Anser)	530	imbricarius (Basilemys)	445
Hypsibema	497	imbricarius (Compsemys)	445
Hypsilophodon	500	imitatus (Platyxystrodus)	290
Hypsirhophide	495	imitatus (Xystrodus)	290
Hypsirophus	488, 495, 496	immanis (Atlantosaurus)	484
Hypsodus	790, 791	immanis (Ornithotarsus)	505
hypsoplepis (Elonichthys)	368	impar (Drepanodon)	471
Hypsorhina	477	impar (Lesticodus)	471
Hypsorhinidae	476	impar (Morosaurus)	483
Hyrachyine	638	impar (Mosasaurus)	471
Hyrachys	625, 626, 638, 640	Imparidigitata	607
Hyracodon	640	impennis (Alca)	524
Hyracodontidae	638, 640	impennis (Plautus)	524
Hyracodontina	640	imperator (Elephas)	713
hyracoides (Tillotherium)	716	imperator (Elotherium)	655
Hyracops	606	imperator (Euelephas)	713
Hyracotheriidae	608	imperialis (Felis)	782
Hyracotheriina	608	imperialis (Hyrachys)	639
Hyracotherium	605, 608, 609, 610, 611, 612	implicatus (Hyrachys)	638, 639
Hystriidae	732	inaequalis (Cholodus)	277
Hystriomorpha	732	inaequalis (Toxichnus)	553
Hystriops	733	inaequidens (Ellipsodon)	606, 746
Hystrix	733	inaequidens (Mioclanus)	746
hystrix (Listracanthus)	336	inaequidens (Tricentes)	746
I.			
Icanodus	291	incedens (Chelonoides)	542
Ichnites	538	incisivus (Clepydrops)	432
Ichthyacanthus	422	incisivus (Cyclopidius)	671
Ichthyodectes	379, 384, 399	incisivus (Dimetrodon)	432
Ichthyodectidae	383	incisivus (Ectocynodon)	428
Ichthyodectina	383	incisivus (Pariotichus)	428
Ichthyodorulites	326	incisus (Cimolestes)	566
Ichthyopterygia	461	incisus (Cynocercus)	442
Ichthyornis	519, 520	Incognitum	710
Ichthyornithes	519	inconditus (Platyxystrodus)	290
Ichthyornithidae	519	inconditus (Xystrodus)	290
Ichthyosauri	461	inconstans (Chomatodus)	280
Ichthyosauria	461	incrassatus (Chomatodus)	280
Ichthyosauridae	462	incrassatus (Dryptosaurus)	488
Ichthyosaurus	462, 463, 466	incrassatus (Edaphodon)	324
Ichthyosuchus	512, 513	incrassatus (Ischyodus)	324
Ichthyotomi	263	incrassatus (Laelaps)	488
Ichthyotringa	397	incrassatus (Petalodus)	280
ictericus (Holcodus)	470	incurvus (Diplodus)	267
ictericus (Lestosaurus)	470	incurvus (Gyracanthus)	335
ictericus (Liodon)	470	incurvus (Megalichthys)	360
ictericus (Platecarpus)	470	incurvus (Rhizodus)	360
Icteridae	537	incurvus (Thrinacodus)	267
Icteyon	770	index (Eohippus)	609
Ictopsidae	738	index (Epihippus)	609
Ictops	739	index (Hyracotherium)	609, 790
idahoensis (Graculus)	533	index (Orohippus)	609
idahoensis (Phalacrocorax)	533	index (Orotherium)	609
idahoensis (Phalacrocorax)	533	indianensis (Canis)	775
Iguana	474	indianensis (Colletosaurus)	542
Iguanavus	471	Indrodon	792
iguanavus (Clidastes)	467	inexpectata (Crocota)	783
Iguanidae	474	inexpectatus (Felis)	783
Iguanodon	502	inexpectatus (Nimravus)	783
Iguanodontia	505	infelix (Steropoides)	552
Iguanodontidae	501, 502	inflexus (Dactylodus)	283
		inflexus (Deltodopsis)	291
		inflexus (Mylocyprinus)	396

	Page.		Page.
inflexus (Polyrhizodus)	283	intermedius (Hyrachyus)	639
ingens (Brontotherium)	636	intermedius (Mesohippus)	614
ingens (Chimarichnus)	550	intermedius (Mesoreodon)	667
ingens (Elotherium)	655	intermedius (Miohippus)	614
ingens (Entelodon)	655	intermedius (Otolithus)	408
ingens (Loxolophodon)	705	intermedius (Palæolagus)	736
ingens (Menodus)	636	intermedius (Ponerichthys)	346
ingens (Ornithichnites)	540, 552	intermedius (Prothyraodon)	640
ingens (Ornithostoma)	508	intermedius (Pseudothyrodon)	393
ingens (Pteranodon)	508	interpolatum (Hippidion)	619
ingens (Pterodactylus)	508	interpolatum (Hippidium)	619
ingens (Sauropus)	550	interpolatus (Pliohippus)	619
ingens (Steropezoum)	552	interruptum (Deltatherium)	751
ingens (Steropoides)	552	interruptus (Mioclanus)	751
ingens (Tinoceras)	705	interruptus (Polyptychodon)	587
ingens (Titanotherium)	635, 636	intrepidus (Drepanodon)	782
ingens (Tridentipes)	552	intrepidus (Felis)	782
ingens (Uintatherium)	705	intrepidus (Pseudæurus)	781, 782
ingenuum (Hippotherium)	620	introvergens (Orthodactylus)	547
inornatus (Deltodus)	292	inversus (Chriacus)	745
inornatus (Gyracanthus)	335	inversus (Pentacodon)	745
inornatus (Manatus)	584	involuta (Arvicola)	728
inornatus (Trichechus)	584	involutus (Microtus)	728
insculpta (Clemmys)	419	involutus (Pitymys)	728
insculpta (Eurylepis)	366	irishi (Glymmatacanthus)	331
insculpta (Mecolepis)	366	irregularis (Crommyodus)	405
insculpta (Testudo)	449	irregularis (Phacodus)	405
insculptus (Beryx)	402	isaaci (Helodectes)	429
Insectivora	737	Isaais	739
insectivora (Sinopa)	752	Ischyodus	324, 325
insectivorus (Stypolophus)	752	Ischypterus	375, 376
Insessores	537	ischypus (Cladodus)	269
insidiosus (Apheliscus)	792	Ischyrrhiza	393, 398
insidiosus (Protomus)	792	Ischyrrhizide	398
insignis (Anaptomorphus)	787	Ischyromyidae	723
insignis (Chomatodus)	280	Ischyromys	724, 725
insignis (Merychippus)	616	ischyros (Archelon)	440
insignis (Palæobatis)	280	ischyros (Protostega)	440
insignis (Petalodus)	280	Ischyrosaurus	461
insignis (Plastomenus)	452	Ischyrotherium	461
insignis (Protohippus)	616	Isectolophus	627
insignis (Tridentipes)	552	islandica (Clangula)	530
insignis (Trimerorhachis)	420	islandica (Glaucionetta)	530
insignis (Washakius)	787	Isocampe	546
insolens (Achanodon)	654	isocelica (Oxyrhina)	306
insolens (Hopliphoneus)	778	isodactylatus (Argoides)	540
insolitus (Paciculus)	727	isodactylum (Brontozoum)	539, 543, 550
insuetus (Homorhophus)	446	isodactylus (Anomæpus)	539
insuetus (Homorophus)	446	isodactylus (Ornithodichnites)	540
insuetus (Otolithus)	408	Isodectes	415, 428
insularis (Lembonax)	444	Isodelta	728, 729
integer (Clastes)	377	isolomus (Pariotichus)	428
integer (Lepisosteus)	377	isonesum (Hipparion)	620
intercostatus (Cladodus)	269	isonesum (Hippotherium)	620
intermedia (Pachyæna)	750	isonesum (Stylonus)	620
intermedia (Hylæpeton)	413	Isophoidæ	378
intermedius (Aminodon)	642	Isospondyli	383
intermedius (Anogmus)	393	Isotænia	325
intermedius (Anomæpus)	539	Istiophoridae	402
intermedius (Clidastes)	467	Istiophorinae	402
intermedius (Deltodus)	292	Istiophorus	402
intermedius (Dinichthys)	346	Isurus	305
intermedius (Elasmosaurus)	458	ithacensis (Dipterus)	351
intermedius (Equus)	622	Ithygrammodon	674
intermedius (Hybocladodus)	271	Ixacanthus	592

	Page.		Page.
Lagomys.....	735	laticeps (Cephalaspis).....	341
lagophagus (Bunælorus).....	767	laticeps (Dinoceras).....	703
lagophagus (Plesiogale).....	767	laticeps (Diracodon).....	496
Lama.....	678	laticeps (Limnhyops).....	630
Lambdodus.....	270	laticeps (Merycochoerus).....	668
lambdoidens (Entoptychus).....	731	laticeps (Limnhyus).....	630
Lambdaotheriidae.....	629	laticeps (Ocotomus).....	703
Lambdaotheriinae.....	629	laticeps (Paleosyops).....	630
Lambdaotherium.....	612, 629, 631	laticeps (Paroceras).....	703
Lamelliostres.....	528	laticeps (Uintatherium).....	703
laminatus (Leuciscus).....	396	laticolle (Scapherpeton).....	424
laminatus (Oligobelis).....	396	laticollis (Apatosaurus).....	485
laminatus (Squalius).....	396	laticunea (Testudo).....	451
Lamna.....	302, 304, 305, 306, 310, 313	laticuneus (Diacodexis).....	790
Lamnæ.....	301	laticuneus (Hyopsodus).....	790
Lamnidae.....	301	laticuneus (Phenacodus).....	609, 790
Lamninae.....	302	latidens (Bathmodon).....	699
Lamnodus.....	359	latidens (Canis).....	771
Lamnoidæ.....	301	latidens (Coryphodon).....	699
Lamnoidea.....	301	latidens (Cynodontomys).....	788
Lamnoidei.....	301	latidens (Diphrissa).....	324
lamnoides (Cladodus).....	269	latidens (Edaphodon).....	324
lanceolata (Lamna).....	305	latidens (Galecyne).....	771
lanceolatus (Carcharias).....	307	latidens (Galeocerdo).....	311
lanceolatus (Carcharodon).....	307	latidens (Galeus).....	311
lanceolatus (Otodus).....	305	latidens (Helaletes).....	627
lancifer (Megalichthys).....	360	latidens (Hylonomus).....	412
lancifer (Rhizodus).....	360	latidens (Isctolophus).....	627
lanciformis (Carcharodon).....	308	latidens (Limnofelis).....	757
lanciformis (Saurocephalus).....	385, 386	latidens (Nothocyon).....	771
Langunculapes.....	546	latidens (Oreocyon).....	757
lanius (Mesonyx).....	750	latidens (Patriofelis).....	757
lanius (Synoplotherium).....	750	latidens (Tillotherium).....	716
Laodon.....	570	latidentatus (Canis).....	775
Laopithicus.....	792	latidentatus (Vulpes).....	775
Laopteryx.....	518	Latifrons.....	690
Laornis.....	531	latifrons (Agriochærus).....	663
Laosauridae.....	501	latifrons (Bison).....	688, 689
Laosaurus.....	501	latifrons (Bos).....	689
laqueatus (Edaphodon).....	324	latifrons (Lestosauros).....	470
laqueatus (Eumylodes).....	324	latifrons (Platecarpus).....	470
laqueatus (Megalonyx).....	577, 579	latifrons (Syllæmus).....	399, 795
laramiensis (Cimoliasaurus).....	459	latifrons (Taurus).....	689
Lari.....	525	latifrons (Uintatherium).....	702
Laridæ.....	525	latilabiata (Emys).....	448
lariformis (Hydrochelidon).....	525	latimentum (Pachyrhizodus).....	388
Larinæ.....	525	latimolis (Polymastodon).....	563
Laroidea.....	525	latior (Deltodus).....	292
Laroideæ.....	525	latipes (Bathmodon).....	699
lartettianum (Odobenotherium).....	784	latipes (Coryphodon).....	699
Larus.....	525	latipinnis (Polycotylus).....	457
lata (Glyptolepis).....	358	latiradix (Rhabdosteus).....	593
lata (Sphyrna).....	314	latiremis (Toxochelys).....	442
lata (Testudo).....	450	latirostris (Manatus).....	584
lateralis (Aublysodon).....	489	latispinosus (Climatius).....	274
lateralis (Deinodon).....	489	latispinosus (Ctenacanthus).....	274
lateralis (Leptonyx).....	547	latispinus (Lestosauros).....	470
laterigerus (Edaphodon).....	324	latispinus (Liodon).....	470
laterigerus (Ischyodus).....	324	latispinus (Platecarpus).....	470
latibuccatus (Diadectes).....	427	latissimus (Carcharodon).....	308
latibuccatus (Empedias).....	427	latissimus (Ptychodus).....	318
latibuccatus (Empedocles).....	427	latithorax (Sauropleura).....	419
laticaudata (Testudo).....	451	lativertebralis (Emys).....	448
laticaudus (Liodon).....	472	latrans (Canis).....	775
laticaudus (Tylosaurus).....	472	latum (Tinoceras).....	705
laticeps (Allodon).....	557	latum (Uintatherium).....	705

	Page.		Page.
latus (Amphicelias)	486	lenticularis (Semionotus)	375
latus (Anchypopsis)	395	lentum (Elotherium)	650
latus (Chitinodus)	293	lentus (Allacodon)	557
latus (Cochliodus)	293	lentus (Baropus)	541
latus (Dactylodus)	283	lentus (Barosaurus)	485
latus (Diplodus)	266	lentus (Graculavus)	520
latus (Dissodus)	266	lentus (Helohyus)	650
latus (Dittodus)	266	lentus (Ichthyornis)	520
latus (Gampsacanthus)	336	lentus (Morosaurus)	483
latus (Glyptolepis)	358	lentus (Nothodon)	428
latus (Holoptychius)	358	lentus (Oreosaurus)	475
latus (Lagunculapes)	546	lentus (Phenacodus)	650, 657
latus (Leucus)	395	lentus (Thinohyus)	657
latus (Loxolophodon)	705	lentus (Tinohyus)	657
latus (Palæoniscus)	375, 376	lentus (Xestops)	475
latus (Palæoscincus)	497	Lepidopleuridæ	372
latus (Polyrhizodus)	283	Lepidosauria	464
latus (Psephodus)	288	Lepidosiren	353
latus (Rutilus)	395	Lepidosirenidæ	353, 355
latus (Semionotus)	376	Lepidosteidæ	374, 376
latus (Torosaurus)	499	Lepidosteini	374, 376
leae (Saurocephalus)	386	Lepidosteoidei	374
leaii (Belodon)	510	Lepidosteus	376
leaii (Clepsisaurus)	510	Lepidostones	374
leaii (Phytosaurus)	510	Lepidotidæ	374
leanus (Saurocephalus)	386	Lepidotus	372, 374, 377
leanus (Saurodon)	386	lepidus (Euryacodon)	741
lecontei (Edestus)	337	lepidus (Tinodon)	567
lecontei (Sigmogomphius)	722	lepidus (Tinosaurus)	476
Lecracanthus	336	lepis (Vaticinodus)	290
Lefalophodon	703, 704, 706	Lepisosteidæ	376
leidianum (Uintatherium)	702	Lepisosteus	376
leidyanum (Elurotherium)	778	lepitopsis (Pachyrhizodus)	388
leidyanum (Elotherium)	656	Leporidæ	735
leidyanus (Ammodon)	656	leporinum (Tricium)	736
leidyanus (Palæoniscus)	367	leporinus (Palæolagus)	736
leidyanus (Patriofelis)	778	Lepospondyli	410
leidyanus (Rhadinichthys)	367	Leptacanthus	330
leidyi (Bothriolepis)	344	leptacanthus (Eucrotaphus)	666
leidyi (Cochliodus)	294	Leptaceratherium	643
leidyi (Delphinodon)	591	Leptarctus	764
leidyi (Megalonyx)	578	Leptauchenia	670, 672, 674
leidyi (Merycochærus)	668	Leptecodon	397
leidyi (Myliobatis)	320	Leptichthys	392
leidyi (Venustodus)	287	Leptictidæ	738
Leidyotherium	636	Leptictis	739
Leiodon	471, 472	leptocentrum (Cetotherium)	599
Leiodus	296	leptocentrus (Eschrichtius)	599
Lembonax	444	leptocephalus (Clepsydrus)	431
lemoinianus (Hyopsodus)	790	leptocephalus (Diopous)	431
lemur (Canis)	772	leptocephalus (Hyænodon)	759
lemur (Galcyne)	772	Leptocheiridæ	656
lemur (Nothocyon)	772	Leptocheirus	657, 792
Lemuravidæ	788	leptodactylum (Spheropezium)	552
Lemuravus	789	leptodactylus (Spheropezopus)	552
Lemures	786	leptodactylus (Thenaropus)	552
lemurinus (Menotherium)	792	leptodactylus (Trienopus)	553
lemurinus (Leptocheirus)	792	leptodirus (Camarasaurus)	486
Lemuroidea	786	leptodon (Careharodon)	308
Lemuroidei	786	leptodon (Oxyrhina)	305
lemuroides (Miocænus)	606	leptodus (Paramys)	724
lenis (Dicotyles)	659	leptodus (Plesiartctomys)	724
lennicorne (Ceraterpeton)	414	leptodus (Thinosaurus)	476
lenticularis (Ischypterus)	375	leptogamus (Caulodon)	484
lenticularis (Merychippus)	617	leptognatha (Pachyæna)	749
lenticularis (Protophippus)	617	leptognathus (Dissacus)	749

	Page.		Page.
leptognathus (Pachyrhizodus).....	388	limatulus (Ctenoptychius).....	281
leptognathus (Procamelus).....	678	limax (Helodus).....	287
Leptomerycinæ.....	671	limbatus (Clepsydraps).....	431
Leptomeryx.....	671	limbatus (Diplocaulus).....	416
leptomitus (Trionyx).....	454	limbatus (Embolophorus).....	431
Leptomylus.....	325	Limicoke.....	526
leptomylus (Didymictis).....	755	limitaris (Icanodus).....	291
leptomylus (Viverravus).....	755	limitaris (Tomodus).....	291
leptonyx (Morotherium).....	580	Limnoceyon.....	751, 752, 755
Leptonyx.....	547	Limnofelis.....	757
Leptophractus.....	354, 419	Limnohyops.....	630
leptophrys (Pleurolicus).....	731	Limnohyus.....	630, 631
leptops (Mephitica).....	766	Limnophis.....	480
leptopsis (Pachyrhizodus).....	388	Limnopus.....	547
leptopterus (Glyptolepis).....	359	Limnosaurus.....	514
Leptoreodon.....	672	Limnotheriidae.....	788
leptorhinus (Platygonus).....	661	Limnotherium.....	788, 789, 791
leptorhynchus (Merychius).....	669	lincolni (Dinichthys).....	347
leptosteus (Bubo).....	536	lincolni (Ponerichthys).....	347
leptostomus (Megalonyx).....	578	lindahlui (Aphelichthys).....	395
Leptostyrax.....	304	linearis (Orthodactylus).....	547
Leptotrachelus.....	397	linearis (Phlegethontia).....	411
Leptotragulinae.....	674	linearis (Plectropterna).....	549
Leptotragulus.....	674	lineata (Eurylepis).....	367
lepturus (Belodon).....	510	lineata (Mecolepis).....	367
lepturus (Cœlacanthus).....	364	lineatus (Haploconus).....	694
lepturus (Phytosaurus).....	510	lineatus (Ischypterus).....	375
lepturus (Trichiurus).....	403	lineatus (Oracanthus).....	334
Lepus.....	736	lineatus (Platyodus).....	290
leslianus (Prochonia).....	438	lineatus (Rhadinichthys).....	367
leslianus (Taphrophys).....	438	lineatus (Sardinus).....	391
lesleyi (Heliodus).....	352	lineatus (Semionotus).....	375
lesleyi (Palæadaphus).....	352	lineolatus (Adocus).....	437
Lesticodus.....	471	lineolatus (Compsemys).....	437
Lestophis.....	480	lineolatus (Leptophractus).....	419
Lestornis.....	521	lineopunctatum (Ceraterpeton).....	414
Lestosaurus.....	469, 470	linguæformis (Strigilina).....	276
lestrio (Portheus).....	384	linguifer (Petalodus).....	278
lestrio (Xiphactinus).....	384	linguiformis (Janassa).....	276
leucas (Delphinapterus).....	594	Liodon.....	467, 470, 471, 472, 473
Leuciscus.....	395, 396	liodon (Crocodylus).....	513
leucopotamicus (Trionyx).....	454	liodontus (Clidastes).....	467
leucopus (Hesperomys).....	726	Liodus.....	296
leucopus (Peromyscus).....	726	Liognathus.....	345
leucopus (Vesperimus).....	726	liolophus (Allomys).....	719
leucopus (Vesperomys).....	726	liolophus (Meniscomys).....	719
leucosteus (Phlaocyon).....	765	liops (Choneziphius).....	597
Leucus.....	395	liops (Prisencara).....	401
Leurocephalus.....	631	Lipodectes.....	745, 751
levatus (Cyprinodon).....	404	lippincottianus (Canis).....	771
levatus (Erimatopterus).....	404	lippincottianus (Cynodictis).....	771, 772
Leviathan.....	707, 709	lippincottianus (Galecynus).....	771
levis (Ctenodus).....	352	liratus (Chitinodus).....	293
levis (Dipterus).....	352	lisbonensis (Empo).....	387
levis (Lamna).....	304	Lisgodus.....	281
levis (Otodus).....	304	Lispognathus.....	345
levisanus (Goniacodon).....	748	Listracanthus.....	336
levisanus (Miocœnus).....	748	Lithophis.....	479
levisanus (Triisodon).....	748	litoralis (Palæotringa).....	527
levisiensis (Cimolichthys).....	586	litoralis (Passalacodon).....	740
ligonia (Testudo).....	451	litoni (Ctenacanthus).....	328
ligoniformis (Desmiodus).....	297	litoni (Deltodus).....	292
lilleyi (Oestophorus).....	337	litoni (Polyrhizodus).....	283
lilleyi (Sphenophorus).....	337	littoralis (Allopus).....	538
lima (Trionyx).....	454	littoralis (Dinophis).....	479
limatulus (Ctenopetalus).....	281	littoralis (Helcura).....	546

	Page.		Page.
littoralis (Palæophis)	479	Lophiotherium	611, 612, 793
littoralis (Palæotringa)	527	Lophobranchii	396
lobatus (Coryphodon)	698, 699	Lophocetus	590
lobatus (Dactylodus)	283	Lophodus	286, 296
lobatus (Phalaropus)	527	Lophodytes	529
lobatus (Polyrhizodus)	283	Loricata	508, 575, 580
Lobipes	527	Loricati	406
Lobodon	785	loricatum (Platystegos)	418
lobulatus (Pelycictis)	766	loriformis (Chomatodus)	280
lockingtonianus (Eumys)	727	loriformis (Petalodus)	280
lockwoodii (Plesiosaurus)	456	loripes (Ornithopus)	552
lockwoodii (Taphrosaurus)	456	loripes (Steropoides)	552
lœvii (Orotherium)	610	lotor (Procyon)	764
lœvii (Pliolophus)	610	lotor (Ursus)	764
logani (Hylopus)	546	lovianus (Psammodus)	284
lomas (Bathmodon)	699	lowii (Desmatochelys)	443
Lomvia	524	lowii (Portheus)	384
longævus (Euphanerops)	341	lowii (Xiphactinus)	384
longicaudatus (Diplurus)	364	Loxodon	712
longicaudus (Notharctus)	649	loxodon (Eumys)	727
longicaudus (Pantolestes)	649	loxodon (Hesperomys)	727
longiceps (Camelomeryx)	672	loxodon (Megalonyx)	578
longiceps (Hadrosaurus)	504	loxodon (Peromyscus)	727
longiceps (Loxolophodon)	705	Loxolophodon	697, 700, 703, 704, 705, 706
longiceps (Pteranodon)	508	Loxolophus	745
longiceps (Tinoceras)	705	loxonyx (Brontozoum)	544
longiceps (Trachodon)	504	loxostyla (Sula)	532
longiceps (Uintatherium)	705	lucare (Dinoceras)	703
longicollis (Cælophysis)	493	lucare (Uintatherium)	703
longicollis (Cœlurus)	493	lucaris (Allosaurus)	489
longicollis (Tanystropheus)	493	lucaris (Labrosaurus)	489
longicriste (Anchitherium)	614	lucaris (Taxymys)	721
longicristis (Meshippus)	614	lucaris (Uintornis)	531
longicristis (Miohippus)	614	lucasanus (Tichosteus)	493
longidens (Mylocyprinus)	396	lucasi (Dittodus)	266
longidentatum (Hylæpeton)	413	lucasi (Amphicotylus)	516
longifrons (Ceterhinops)	590	lucasi (Goniopholis)	516
longifrons (Eporeodon)	667	lucasi (Pediocætes)	534
longimana (Megaptera)	600	Luciidae	398
longinuchus (Taphrosphys)	438	lucius (Alligator)	514
longipes (Aceratherium)	646	lumpus (Cyclopterus)	407
longipes (Aphelops)	646	lunatus (Dipriodon)	561
longipes (Colodon)	626	lunatus (Meniscoëssus)	561
longipes (Meshippus)	626	lunatus (Ptilodus)	561
longipes (Plectropus)	549	lunulatus (Psephodus)	288
longipes (Rhinoceros)	646	lupina (Oxyæna)	757
longipes (Sauroidichnites)	549	lupus (Canis)	774, 775, 776
longipes (Sauropleura)	415	luscus (Gulo)	768
longipes (Tuditanus)	415	luscus (Ursus)	768
longipinnis (Leptotrachelus)	397	Lutra	768
longirostris (Edaphodon)	324	Lutricitis	768, 769
longirostris (Eschatus)	680	Lutrinæ	768
longirostris (Ischyodus)	324	Lutrinæ	768
longirostris (Mastodon)	711	luxatus (Colodon)	626
longirostris (Palæosyops)	631	lycopotamica (Lutra)	769
longirostris (Ziphius)	597	lycopotamicus (Lutricitis)	769
longispinis (Pterodactylus)	461	lydekkerianus (Miocænus)	606
longispinus (Rhabdopelix)	461	lydekkerianus (Protogonodon)	606
longulus (Proballostomus)	394	lyelli (Hylonomus)	412
longus (Diplodocus)	486	lyelli (Ornithoidichnites)	544
longus (Mioplosus)	405	lyelli (Pelion)	411
Lophiodon	611, 624, 625, 626, 628, 638, 639	lyelli (Raniceps)	411
Lophiodontidæ	624	lyellianus (Æthiopus)	544
Lophiodontinæ	624	lyellianus (Amblonyx)	544
Lophiodontoidea	624	lyellianus (Fulicopus)	544
		lyellii (Lamna)	305

	Page.		Page.
Lynx	783	macrospondylus (Zeuglodon)	587
Lysopteri	365	macrostegus (Merycochoerus)	668
Lysorhophus	433	macrota (Lamna)	305
Lysorophus	433	macrotus (Otodus)	305
Lytoloma	441, 443, 795	macrura (Dictyopyge)	370
Lytolomidae	440	macrurus (Catopterus)	370
M.			
maccoyanus (Erisimacanthus)	335	macrurus (Molgophis)	412
Macelognatha	505	madisonius (Palaeomeryx)	682
Macelognathidae	505	madisonius (Procamelus)	678
Macelognathus	505	magister (Myliobatis)	320
Machæracanthus	331	magister (Neotoma)	727
Machærius	331	magister (Sagenodus)	355
Machærodinae	777	magna (Notamphibia)	547
Machærodontinae	777	magna (Sphyrna)	314
Machærodus	777, 778, 779, 780, 781	magnicaudatus (Crossopholis)	372
Machærodinae	777, 781	magnicornis (Diplocaulus)	416
Machærodontinae	777	magnificus (Cladodus)	268, 269
machlis (Alces)	685	magnificus (Gyracanthus)	335
Machairodus	777, 778, 779, 780, 781	magnus (Cimoliasaurus)	456, 459
Machairodinae	777, 781	magnus (Cyphornis)	532
Machairodontinae	777	magnus (Discosaurus)	459
macis (Alces)	685	magnus (Hydrochoerus)	734
Machairos	777, 778, 779, 780, 781	magnus (Trihamus)	553
macisaacsi (Bathychilodus)	270	major (Agriochoerus)	664
macisaacsi (Pheobodus)	270	major (Ammosaurus)	491
macconnellii (Ameiurus)	383	major (Anchisaurus)	491
Macrepistius	378	major (Anomcepus)	539
macrocephalus (Agriochoerus)	663	major (Auchenia)	678
macrocephalus (Camelops)	679	major (Deinictis)	780
macrocephalus (Coloreodon)	663	major (Dinictis)	780
macrocephalus (Holomeniscus)	679	major (Eporeodon)	667
macrocephalus (Physeter)	595	major (Equus)	622
macroductylata (Platypterna)	540	major (Eucrotaphus)	663, 667
macroductylatus (Argoides)	540	major (Hyracodon)	641
macroductylatus (Ornithoidichnites)	540	major (Lama)	678
macrodon (Diastichus)	395	major (Leptauchenia)	670
macrodon (Galera)	767	major (Machæracanthus)	331
macrodon (Galictis)	767	major (Merychius)	669
macrodon (Putorius)	767	major (Merycoidodon)	667
macromus (Cocosteus)	344	major (Mosusaurus)	465
Macropetalichthyidae	349	major (Oreodon)	667
Macropetalichthys	349	major (Orodus)	295
Macrophoca	589	major (Orohippus)	610, 611
macropomus (Megalichthys)	362	major (Palæosyops)	631
macropomus (Parabatrachus)	362	major (Pliauchenia)	678
macrops (Choneziphius)	597	major (Pliolophus)	611
macrops (Euchærus)	660	major (Procamelus)	678
macrops (Prorziphius)	597	major (Prospiraxis)	338
Macropterna	544, 548, 550	major (Saniwa)	475
macropternus (Phenacodus)	604	major (Sphyræna)	400
macropterus (Amblypterus)	368	major (Spiraxis)	338
macropterus (Elonichthys)	368	major (Teleoceras)	646
macropterus (Ischypterus)	375	major (Trigonodus)	292
macropterus (Palæoniscus)	375	majus (Aceratherium)	647
macropterus (Rabdolepis)	368	malacorbium (Aceratherium)	646
macropus (Dryptosaurus)	488	malacorbium (Peraceras)	646
macropus (Graculus)	533	malacorbium (Teleoceras)	646
macropus (Laelaps)	488	malacorbium (Aphelops)	646
macropus (Phalacrocorax)	533	malaris (Indrodon)	792
macrorhiza (Lamna)	303	Mallotus	392
macrorhynchus (Bottosaurus)	514	mammillaris (Ovis)	687
macrorhynchus (Crocodylus)	514	Mammalia	553
Macrosaurus	467, 471, 472, 473	mammifer (Leptomeryx)	671
Macrosemiidae	378	mammillaris (Trionyx)	454
Macrosemius	378	mammillaris (Orodus)	295
macrospondyla (Amia)	381	mammillaris (Ptychodus)	318
Macrospondylus	468		
macrospondylus (Clepsydrops)	431		

	Page.		Page.
Mammut	707	matutinus (Aphelops)	646
Manometum	708	matutinus (Rhinoceros)	646
Manatida	583	maxillaris (Parabatrachus)	362
Manitide	583	maxillaris (Megalichthys)	362
Manatus	583, 584	maximillianus (Mosasaurus)	465, 466
manatus (Trichechus)	584	maximum (Palæotherium)	636
mandibularis (Anisonchus)	695	maximum (Titanotherium)	636
mandibularis (Mioclanus)	695	maximus (Eusiodon)	646
mandibularis (Pygopterus)	367	maximus (Felis)	783
manigaultii (Dioplotherium)	583	maximus (Mastodon)	708
manitobensis (Lamna)	303	maximus (Mosasaurus)	466
manni (Agassichthys)	349	mayi (Ctenacanthus)	328
manni (Macropetalichthys)	349	Mazama	684
Manospondylus	500	Mazodus	285
Manta	321	meandrinus (Ælurodon)	774
mantelli (Isurus)	306	Mecolepis	366, 367
mantelli (Lamna)	306	Mecraspedota	452
mantelli (Oxyrhina)	306	media (Amia)	381
Manteoceras	632	media (Protamia)	381
manteoceras (Manteoceras)	632	media (Pliauchenia)	678
manteoceras (Palæosyops)	632	mediævus (Ptilodus)	559
Manteodon	697, 700	mediatlanticus (Diaphorocetus)	596
Mantide	321	mediatlanticus (Hypocetus)	596
Mareca	529	mediatlanticus (Paracetus)	596
marginale (Herpetotherium)	571	medium (Brontotherium)	635
marginale (Peratherium)	571	medius (Anrodemus)	489
marginalis (Didelphis)	571	medius (Camptosaurus)	501
marginalis (Didelphys)	571	medius (Clidastes)	467
marginalis (Embassis)	571	medius (Ctenopetalus)	281
marginatus (Copodus)	285	medius (Ctenoptychius)	281
marginatus (Coryphodon)	699	medius (Labrosaurus)	489
marginatus (Labodus)	285	medius (Merychyus)	669
marila (Athyia)	530	medius (Procamelus)	678
marila (Fuligula)	530	medius (Protohippus)	616
marnochii (Cistudo)	449	medius (Titanops)	635
marnochii (Terrapene)	449	megacephalus (Eryops)	422
Marracanthus	329	Megaceratops	635, 636, 637
marshi (Leptoreodon)	672	Megacerops	633, 637
marshii (Archelon)	440	Megadactylus	491
marshii (Canis)	776	Megalichthyidæ	359
marshii (Colosteus)	414	Megalichthys	354, 359, 362
marshii (Ctenacanthus)	327	Megalneusaurus	457
marshii (Ischypterus)	375	megalodon (Carcharias)	308
marshii (Oestocephalus)	414	megalodon (Carcharodon)	308
marshii (Ptycholepis)	378	megalodus (Aceratherium)	646
marshii (Ptyonius)	414	megalodus (Aphelops)	646
marshii (Semionotus)	375	megalodus (Psittacotherium)	574
Marsupialia	563	megalodus (Rhinoceros)	646
Marsupialia	563	Megalomeryx	679
marsupialis (Didelphys)	571	Megalonix	577, 578
marsupialioideus (Cunichnoides)	543	Megalonychidæ	575
Martes	767, 768	Megalonyx	577, 578, 579
martini (Ptychodus)	318	megalophysum (Cetotherium)	569
marylandicus (Crocodylus)	513	megaloporus (Piptomerus)	457
massetericus (Didymictis)	755	megalops (Isodectes)	428
massetericus (Viverravus)	755	megalops (Pariotichus)	428
Masticura	317	Megalosauria	487
Mastodon	707, 708, 709, 710, 711, 712, 714	Megalosauridæ	487, 493
Mastodontosauri	423	Megalosaurus	487, 488, 490, 493, 494
Mastodontosauria	423	Megalosauridæ	575
Mastodontosauridæ	423	Megalotheriæ	576
Mastodontosaurus	423	Megalotherium	307
mastodontoides (Tapirus)	708	megalotis (Carcharias)	307
mastodontoides (Tetracaulodon)	708	megalotis (Carcharodon)	353
mastodontoides (Tapirus)	708	Megapleuron	599, 600
matutinum (Aceratherium)	646	Megaptera	632
		megarhinum (Telmatherium)	

	Page.		Page.
megarhinum (Telmatotherium)	631, 632	Mesogaulus	721
megarhinus (Palæosyops)	632	Mesohippus	612, 613, 614, 617, 626
Megatheriidae	575	Mesonychidae	747, 749
Megatherium	576, 714	Mesonychinae	749
megaulax (Emys)	448	Mesonychini	749
Megencephalon	769	Mesonyx	750
Megencephalum	769	Mesoödon	597
Megistosaurus	595	Mesoplacentalia	563
Meleagrididae	534	Mesoplodon	597
Meleagrinae	534	mesops (Trimerorhachis)	420
Meleagris	534	Mesoreodon	667
Meles	765	Mesotapirus	626
Melidae	765	Mesoteras	600
Melinæ	765	Metalophodon	697, 698, 700
Melini	765	Metamosaurus	434
Menacodon	568	Metamynodon	642
Meniscoëssus	450, 560	Metatheria	563
Meniscomys	718, 719	Metopocetus	598
Meniscotheriidae	605	metisiacus (Pantolestes)	649
meniscus (Miocænus)	747	metisiacus (Trigonolestes)	649
Meniscotaerium	605, 606	meyeri (Otolithus)	409
Menodontidae	629	Miacidae	759
Menodus	633, 634, 635, 636, 637	Miacis	718, 752, 759, 760, 761
Menops	636, 637	Microbrachidae	415
Menotherium	792	Microclænodon	748
mentale (Amyzon)	395	Microconodon	556
mentalis (Antiacodon)	793	Microdon	373
mentalis (Sarcolemur)	793	Microdus	313
mento (Delphinodon)	591	microdus (Edaphosaurus)	432
mento (Squalodon)	591	microdus (Naosaurus)	432
mephitica (Mephitis)	766	microdus (Oreosaurus)	475
Mephitinae	765	microdus (Xestops)	475
Mephitis	766	microglypha (Zygoramma)	445
mercerii (Felis)	778, 783	microlepedotus (Glyptolepis)	359
mercerii (Machærodus)	778	micromus (Liodon)	472
mercerii (Machairodus)	778	micromus (Tylosaurus)	472
mercerii (Smilodon)	778	micromus (Rhinosaurus)	472
mercerii (Uncia)	778, 783	microphthalmus (Zatrachys)	422
mercurii (Deltodus)	292	microporus (Piptomerus)	457
Mergus	529	Micropteron	597
meridianum (Aceratherium)	616	micropterus (Ischypterus)	375
meridianus (Aphelops)	646	micropterus (Semionotus)	375
meridianus (Rhinoceros)	646	micropus (Cladodus)	269
Meriones	732	Microsauria	410
merrillii (Empo)	387	Microsaurus	792
Merychippus	616	Microsyops	791, 792
Merychys	668, 669	Microtinæ	728
Merycochærus	667	Microtus	728
Merycodesmus	672	miersii (Dipristis)	324
Merycodus	682, 683	miersii (Edaphodon)	324
Merycoidodon	665	miersii (Ischyodus)	324
Merycoidodontinae	665	miersii (Mosasaurus)	466
Merycopater	662, 663	migrans (Agriochærus)	664
Mesacanthus	273	migrans (Agriomeryx)	664
Mesacodon	794	migrans (Coloreodon)	664
Mesaxonia	607	Millerichthys	343
Mesichthyes	397	milo (Agathaumas)	502
Mesobatis	320	mimeticus (Otocælus)	430
Mesoceti	538	minima (Auchenia)	678
Mesocetus	596, 600	minima (Eurylepis)	366
Mesocyon	773	minima (Exocampe)	544
Mesodactyla	602	minima (Haplolepis)	366
Mesodectes	739	minima (Lama)	678
Mesodmodus	297	minima (Leptauchenia)	672
Mesodon	372, 373	minima (Pliauchenia)	673, 680
Mesodonta	786	minimum (Anchithérium)	795

	Page.		Page.
minimum (Argozoum)	548, 550	minutus (Adjidaumo)	720
minimum (Hipparion)	620, 795	minutus (Antliodus)	279
minimus (Anomœpus)	539	minutus (Cimolomys)	560
minimus (Argoides)	540, 448, 550	minutus (Ctenodus)	352
minimus (Dactylodus)	283	minutus (Diplodus)	266
minimus (Hypisodus)	672	minutus (Dipterus)	352
minimus (Miocœnus)	606, 746	minutus (Entomacodon)	741
minimus (Mysops)	725	minutus (Equus)	617
minimus (Plesiornis)	550	minutus (Gymnoptechus)	720
minimus (Pachyrhizodus)	388	minutus (Ischypterus)	375
minimus (Ornithoidichnites)	548, 550	minutus (Isurus)	306
minimus (Procamelus)	678	minutus (Mysops)	725
minimus (Polyrhizodus)	283	minutus (Nanomysops)	560
minimus (Syllophodus)	725	minutus (Nanomys)	560
minitans (Electropterna)	549	minutus (Oreosaurus)	475
minitans (Plectropus)	549	minutus (Ornithomimus)	494
minitans (Sauroidichnites)	549	minutus (Orodus)	295
minor (Æthyopus)	550	minutus (Petalodus)	279
minor (Anomœpus)	539	minutus (Semionotus)	375
minor (Anchippodus)	717	minutus (Xestops)	475
minor (Auchenia)	678	Miobasileus	634, 635
minor (Baphetes)	418	Miocœnidae	606
minor (Bothriolepis)	343	Miocœnus	603, 606, 607, 649,
minor (Carcharodon)	309		694, 695, 744, 746, 747, 748, 749, 751, 762
minor (Catopterus)	370	Miodonta	718
minor (Dinichthys)	347	Miohipus	612, 613, 614
minor (Edestus)	337	Miolabina	676
minor (Entoptychus)	731	Miolabis	676, 677
minor (Euprotogonia)	603	Mioplosus	404
minor (Fulica)	528	Miothen	571, 741
minor (Fulicopus)	550	mira (Ischyrliza)	398
minor (Galeocerdo)	311, 313	mirabile (Dinoceras)	703
minor (Gigandipus)	545	mirabile (Megatherium)	576
minor (Gavialis)	515	mirabile (Uintatherium)	703
minor (Hadrosaurus)	504	mirabilis (Dielonius)	504
minor (Hylopus)	546	mirabilis (Diplognathus)	348
minor (Lama)	678	mirabilis (Hadrosaurus)	504
minor (Merycoidodon)	666	mirabilis (Merychippus)	617
minor (Mosasaurus)	466	mirabilis (Physonemus)	334
minor (Oreodon)	666	mirabilis (Plesiornis)	550
minor (Palæosyops)	630, 632, 717	mirabilis (Pliohippus)	617
minor (Plesiornis)	539, 550	mirabilis (Protohippus)	617, 618
minor (Pliauchenia)	678	mirabilis (Trachodon)	504
minor (Ponerichthys)	347	mirabilis (Xystacanthus)	334
minor (Procamelus)	678	mirandus (Aublysodon)	489
minor (Protogaleus)	311	mirificum (Mammut)	711
minor (Protogonia)	603	mirificus (Dibelodon)	711
minor (Protoreodon)	664	mirificus (Ischyodus)	324
minor (Psephodus)	289	mirificus (Edaphodon)	324
minor (Redfieldius)	370	mirificus (Mastodon)	711
minor (Sandalodus)	289	mirificus (Tetralophodon)	711
minor (Tetraclænodon)	603	mirus (Apatodon)	506
minor (Thecachampsa)	515	mirus (Calamodon)	575
minor (Trachodon)	501	mirus (Ophiacodon)	434
minor (Trigonodus)	289	mirus (Stylnodon)	575
minus (Gigantitherium)	545	mississippiensis (Alligator)	514
minus (Telmatotherium)	631	mississippiensis (Canis)	775
minus (Tillotherium)	717	mississippiensis (Crocodylus)	514
minusculum (Brontozoum)	544	mississippiensis (Elephas)	714
minusculus (Desmodus)	297	Missourian	707
minusculus (Dilophodon)	626	missouriense (Orycterotherium)	579
minusculus (Eubrontes)	544	missouriensis (Batrachiosaurus)	466
minusculus (Helaletes)	626	missouriensis (Leviathan)	709
minusculus (Hypsodus)	790	missouriensis (Mosasaurus)	466
minusculus (Orodus)	297	missouriensis (Notalacerta)	547
minuta (Oxyrhina)	306, 313	missouri (Leviathan)	709

	Page.		Page.
Missourium	707, 708, 709	montanus (Bunomeryx)	650, 672
missuriense (Batrachiotherium)	466	montanus (Canis)	776
missuriensis (Batrachosaurus)	466	montanus (Ceratops)	500
missuriensis (Ichthyosaurus)	466	montanus (Dermodactylus)	507
missuriensis (Polythorax)	438	montanus (Diconodon)	647
mittchelli (Acanthodes)	273	montanus (Merycochoerus)	668
mittchelli (Geosaurus)	471	montanus (Pliolophus)	610
mittchelli (Liodon)	471	montanus (Pleurocœlus)	483
mittchelli (Mosasaurus)	440, 465, 471	montanus (Procamelus)	678
mittchillii (Macrosaurus)	471	montanus (Protolabis)	678
mittchillii (Tylosaurus)	471	montanus (Pterodactylus)	507
mite (Aceratherium)	643	montanus (Steneoiber)	722
mite (Anthracotherium)	652	montanus (Symborodon)	637
miticulus (Esthonyx)	790	montanus (Titanosaurus)	484
miticulus (Hypsodus)	790	montezumæ (Hipparion)	620
mitis (Cænopus)	643	montezumæ (Hippotherium)	620
mitis (Elomeryx)	652	moodii (Otozoum)	547
mixeri (Dinichthys)	347	moratus (Ulias)	599
Mixodectes	786	mordax (Dipterus)	352
Mixodectidæ	786	mordax (Myliobatis)	320
Mobulidæ	311	mordax (Tuditanus)	415
modesta (Phoca)	589	Moropodidæ	690
modestus (Hyrachyus)	639	Moropus	691
modestus (Ischypterus)	376	Morosauridæ	482
modestus (Lophiodon)	639	Morosaurus	483, 517
modestus (Polyrhizodus)	283	Morotherium	579
modestus (Semionotus)	376	morsitans (Oxyæna)	757
modestus (Squalodon)	589	mortifer (Cladodus)	269
modulus (Palæoniscus)	367	mortoni (Archæotherium)	655
modulus (Rhadinichthys)	367	mortoni (Atlantochelys)	440
molaris (Chomatodus)	280	mortoni (Carcharodon)	308
molaris (Diadectes)	427	mortoni (Elotherium)	655
molaris (Empedias)	427	mortoni (Entelodon)	655
molaris (Empedocles)	427	mortoni (Hemiptychodus)	317
molaris (Petalodus)	280	mortoni (Ptychodus)	317
molestus (Bathmodon)	699	mortuarius (Agathaumas)	498
molestus (Chirox)	559	mortuarius (Polyonax)	498
molestus (Coryphodon)	699	Mosasauria	464
molestus (Hexodon)	573	Mosasauridæ	464
molestus (Neoplagiaulax)	559	Mosasaurinæ	464
Molgophidæ	411	Mosasaurus	440, 464, 469, 471, 472, 473, 517
Molgophis	412	moschatus (Bos)	688
molopina (Anosteira)	452	moschatus (Bubalus)	688
molopinus (Plastomenus)	452	moschatus (Ovibos)	688
molops (Bothremys)	438	mucronatus (Antliodius)	279
molops (Taphrosphys)	438	mucronatus (Otolithus)	408
molossus (Portheus)	384	mucronatus (Petalodus)	279
molossus (Xiphaetinus)	384	mudgei (Colonosaurus)	520
monax (Aretomys)	720	mudgei (Holcodius)	470
monax (Mus)	720	mudgei (Lamna)	303
Monitoridæ	476	mudgei (Lestosaurus)	470
monoceros (Monodon)	594	mudgei (Liodon)	470
Monocladodus	272	mudgei (Platecarpus)	470
Monoclonius	499, 500	mudgei (Plesiosaurus)	456
Monodelphia	571	mudgei (Portheus)	384
Monodon	594	mudgei (Xiphaetinus)	384
monodon (Mylagaulus)	721	mudgei (Rhinosaurus)	470
monolophus (Edaphodon)	324	mudgianus (Acondylacanthus)	330
monolophus (Ischyodus)	324	Mugilidæ	399
Monopnoa	426	Mugiloides	399
Monotrena	555	multicarinatus (Orodus)	296
monroei (Cladodus)	269	multicinctus (Dissorhophus)	420
montanum (Hyracotherium)	610	multicuspis (Prototomus)	752
montanum (Titanotherium)	635, 637	multicuspis (Sinopa)	752
montanus (Anisacodon)	637	multicuspis (Stypolophus)	752
montanus (Atlantosaurus)	484	multidens (Hylonomus)	412

	Page.		Page.
nematodon (<i>Hesperomys</i>)	727	nobilis (<i>Cochliodus</i>)	293
nematodon (<i>Peromyscus</i>)	727	nobilis (<i>Helodus</i>)	293
Nematognathi	381	nobilis (<i>Pliogonodon</i>)	517
Nemorhædus	687	nobilissimus (<i>Holoptychius</i>)	358
neocæsariensis (<i>Isotania</i>)	325	Nodosauridæ	497
neocæsariensis (<i>Gavialis</i>)	515	Nodosaurus	497
neocæsariensis (<i>Thoracosaurus</i>)	515	nodosus (<i>Glyptosaurus</i>)	475
Neoplagiulax	559	nodosus (<i>Taphrosphys</i>)	438
Neornithes	519	norwoodensis (<i>Pterichthys</i>)	349
Neoselachii	301	notabilis (<i>Aspidichthys</i>)	345
Neotoma	727	notabilis (<i>Clastes</i>)	377
Neotominae	727	notabilis (<i>Lepidotus</i>)	377
neovidei (<i>Mosasaurus</i>)	466	notabilis (<i>Lepisosteus</i>)	377
nepæolica (<i>Cimolichthys</i>)	387	Notalacerta	547
nepæolica (<i>Empo</i>)	387	Notamphibia	517
nepæolicus (<i>Liodon</i>)	472	Notharetus	610, 649, 788, 789, 790, 793
nepæolicus (<i>Rhamphosaurus</i>)	472	Nothocyon	771
nepæolicus (<i>Tylosaurus</i>)	472	Nothodon	428
nepaholica (<i>Empo</i>)	387, 795	Nothodontidae	426
Nephrosteon	505	Nothosaurops	457
neptunia (<i>Protostega</i>)	440	Nothosaurus	455, 457
Neptunochelys	410	Notidani	300
Neurodromus	481	Notidanidae	300
Neurodromicus	481	Notidanus	300, 301
newberryana (<i>Amia</i>)	381	Notogoneus	392
newberryi (<i>Brachyectes</i>)	413	Notomorpha	447, 448
newberryi (<i>Chomatodus</i>)	280	Notropis	396
newberryi (<i>Cladodus</i>)	272	novomehicanus (<i>Calamodon</i>)	575
newberryi (<i>Cladoselache</i>)	272	novomehicanus (<i>Ectoganus</i>)	575
newberryi (<i>Dinichthys</i>)	347	novomehicanus (<i>Stylinodon</i>)	575
newberryi (<i>Sauroplesura</i>)	419	novo-mexicanus (<i>Orthopleurodon</i>)	289
newmani (<i>Cladodus</i>)	269	novo-mexicanus (<i>Sandalodus</i>)	289
nidificans (<i>Batrachoides</i>)	541	Numenius	526
nigra (<i>Hydrochelidon</i>)	525	nummifer (<i>Ptyonius</i>)	414
nigricans (<i>Anser</i>)	530	Nummoplatys	401
nigricollis (<i>Colymbus</i>)	523	nunenius (<i>Phenacodus</i>)	604
Nimravidæ	777	numenium (<i>Pelycodus</i>)	789
Nimravinae	777	numienus (<i>Phenacodus</i>)	604
Nimravus	781, 783	nuperus (<i>Acondylacanthus</i>)	330
niobrarensis (<i>Megalomeryx</i>)	679	nuptus (<i>Pantolestes</i>)	649
niobrarensis (<i>Procamelus</i>)	679	nuptus (<i>Trigonolestes</i>)	649
niobrarensis (<i>Stylomys</i>)	450	Nyctilestes	742
niobrarensis (<i>Testudo</i>)	450	Nyctitherium	742
nitens (<i>Allomys</i>)	719	Nyctodactylinae	508
nitens (<i>Meniscomys</i>)	719	Nyctodactylus	508
nitida (<i>Bothriolepis</i>)	344	Nyctosauridæ	508
nitida (<i>Erisichthe</i>)	379	Nyctosaurus	508
nitida (<i>Leptauchenia</i>)	670		
nitida (<i>Protosphyæna</i>)	379		
nitidus (<i>Cimolodon</i>)	560		
nitidus (<i>Cimolomys</i>)	560		
nitidus (<i>Cochliodus</i>)	294		
nitidus (<i>Deltoptychius</i>)	294		
nitidus (<i>Ectosteorhachis</i>)	362		
nitidus (<i>Entomodon</i>)	755		
nitidus (<i>Hybocladodus</i>)	271		
nitidus (<i>Megalichthys</i>)	362		
nitidus (<i>Parabatrachus</i>)	362		
nitidus (<i>Paramys</i>)	724		
nitidus (<i>Sciuravus</i>)	724		
nitidus (<i>Stenacanthus</i>)	344		
nitidus (<i>Talpavus</i>)	738		
nitidus (<i>Viverravus</i>)	755		
nitor (<i>Stagodon</i>)	564		
nobilis (<i>Aletornis</i>)	528		
nobilis (<i>Chitinodus</i>)	293		

O.

oarthrus (<i>Mosasaurus</i>)	466
obesus (<i>Comptichnus</i>)	542
obesus (<i>Hoplocetus</i>)	596
obesus (<i>Myliobatis</i>)	320
obesus (<i>Rosmarus</i>)	784
obliqua (<i>Lamna</i>)	305
obliquidens (<i>Hyrachys</i>)	640
obliquidens (<i>Protosphyæna</i>)	379
obliquidens (<i>Merycochoerus</i>)	668
obliquidens (<i>Protapirus</i>)	627
obliquidens (<i>Trioplos</i>)	640
obliquum (<i>Ginglymostoma</i>)	310
obliquus (<i>Acrodobatis</i>)	310
obliquus (<i>Carcharodon</i>)	305
obliquus (<i>Chomatodus</i>)	280
obliquus (<i>Cochliodus</i>)	294
obliquus (<i>Corax</i>)	309

	Page.		Page.
obliquus (Coryphodon)	698, 699	occidentalis (Protosphyraena)	380
obliquus (Deltodus)	292	occidentalis (Pteranodon)	508
obliquus (Tæniodus)	292	occidentalis (Pterodactylus)	508
obliquus (Teniodus)	292	occidentalis (Ptychodus)	318
obliquus (Oracanthus)	334	occidentalis (Rhinoceros)	643, 644
obliquus (Otodus)	305	occidentalis (Rhizodus)	354
obliquus (Psephodus)	288	occidentalis (Rhynchodus)	323
oblongus (Cymatodus)	277	occidentalis (Sagenodus)	354
oblongus (Ganorhynchus)	352	occidentalis (Scymnorhinus)	314
obscurum (Mammut)	711	occidentalis (Scymnus)	314
obscurus (Compsemys)	437	occidentalis (Strepsodus)	354
obscurus (Crocodylus)	516	occidentalis (Thespesius)	502
obscurus (Chomatodus)	277	occidentalis (Xystrodus)	289
obscurus (Compsemys)	437	occiduus (Delphinus)	594
obscurus (Emys)	437	occiduus (Nothosaurops)	457
obscurus (Holops)	516	occiduus (Nothosaurus)	457
obscurus (Mastodon)	710, 711, 712	occiduus (Plesiosaurus)	457
obscurus (Tanaodus)	277	ocellatus (Glyptosaurus)	475
obscurus (Tetrabelodon)	711	Ochlodus	265
obscurus (Thoracosaurus)	516	Ochotona	735
obsoletus (Leptophractus)	354, 419	Ochotonidae	735
obtusa (Eupachemys)	448, 451	Octacodon	652
obtusata (Mephitis)	766	octonarius (Hadrianus)	450
obtusidens (Mesonyx)	750, 751	Octotomus	702, 703
obtusidens (Theropleura)	433	Odobenidae	783
obtusilobus (Stibarus)	672	Odobenus	783
obtusum (Denderpeton)	415	Odobenidae	783
obtusus (Dryolestes)	569	Odobenotherium	784
obtusus (Triceratops)	499	Odobenus	784
obtusus (Tuditanus)	415	Odocoileus	684
occidentale (Aceratherium)	643	Odontacanthus	342
occidentale (Anthracotherium)	652	Odontaspides	301
occidentale (Hipparion)	620	Odontaspidoidea	301
occidentale (Hippotherium)	619, 620	Odontaspis	301, 302, 303, 304, 313
occidentalis (Acondylacanthus)	330	Odontholceæ	520
occidentalis (Æchmophorus)	524	Odontocece	588
occidentalis (Boavus)	479	Odontocece	588
occidentalis (Cænopus)	643	Odontocece	588
occidentalis (Canis)	776	Odontocece	520
occidentalis (Cladoecylus)	399	Odonotormæ	519
occidentalis (Cladodus)	269	Odonotornithes	519, 520
occidentalis (Clastes)	377	Odonotormæ	519
occidentalis (Coccosteus)	344, 345	œdemia (Anosteira)	453
occidentalis (Cochliodus)	292	œdemiæ (Plastomenus)	453
occidentalis (Colodon)	626	Oëstocephalus	414, 415
occidentalis (Ctenopetalus)	281	Oëstophorus	337
occidentalis (Ctenoptychius)	281, 282	ogmius (Compsemys)	445
occidentalis (Deltodus)	292	Ogmophis	480
occidentalis (Drepanodon)	778	Ogmorhinus	785
occidentalis (Eporeodon)	667	ohiensis (Ichthyacanthus)	422
occidentalis (Equus)	623	ohioensis (Castoroides)	733
occidentalis (Eucrotaphus)	667	ohioensis (Ctenodus)	354
occidentalis (Hadrosaurus)	502	ohioensis (Getalodus)	278
occidentalis (Harpacodus)	282	ohioensis (Petalodus)	278
occidentalis (Hoplophoneus)	778	ohioensis (Sagenodus)	354, 419
occidentalis (Lepidotus)	377	ohionis (Castor)	733
occidentalis (Lepisosteus)	377	ohionis (Trogotherium)	733
occidentalis (Leptacanthus)	330	ohioticus (Mastodus)	708
occidentalis (Lophiodon)	626	ohioticus (Tetracaulodon)	708
occidentalis (Mosasaurus)	465	ohioticus (Trilophodon)	708
occidentalis (Oreodon)	667	Oligobelis	396
occidentalis (Palæonictis)	756	Oligobunis	770
occidentalis (Petrodus)	298	Oligoplarchus	405
occidentalis (Podiceps)	524	Oligosimus	459
occidentalis (Procamelus)	677, 678	Oligosomus	459
occidentalis (Protocamelus)	678	Oligotomus	605, 611

	Page.		Page.
Olor	530	ornatus (Cœlacanthus)	364
omnivorus (Phenacodus)	604	ornatus (Cœlorhynchus)	331
Omomys	787, 788	ornatus (Cylindracanthus)	531
Omosauridæ	495	ornatus (Deltodus)	293
Omosaurus	496, 509, 510	ornatus (Glyptops)	437
onchognathus (Baptosaurus)	468	ornatus (Hoplophorus)	580
Onchus	326	ornatus (Mesodmodus)	297
Oncobatis	316	ornatus (Peritresius)	441
Ondatra	729	ornatus (Pœcilodus)	293
Ontocetus	596	ornatus (Redfieldius)	370
Onychodectis	573	ornatus (Orodus)	295
Onychodontidæ	362	ornatus (Tylosteus)	477
Onychodus	363	Ornithites	538
Ophiacodon	434	Ornithiornithes	538,
Ophidia	478	539, 540, 543, 544, 545, 550, 551, 552	
ophryas (Brontotherium)	635	Ornithischia	495
ophryas (Miobasileus)	635	Ornithocephalidæ	506
ophryas (Symborodon)	635	Ornithocephalus	507
Ophthalmosaurus	463	Ornithochirus	507, 508
Opisarthri	300	Ornithodelphia	555
opisthaca (Protoselene)	607	Ornithoidichnites	538, 539,
opisthacæus (Hemithlæus)	607	540, 541, 542, 543, 544, 545, 548, 549, 550, 551, 552	
opisthacæus (Miochenus)	607	Ornithomimidæ	494
Opistharthri	300	Ornithomimus	494
Opisthocælia	482	Ornithopappi	518
Opisthotomus	787, 792	Ornithopoda	495, 500
Oracanthus	332, 334	Ornithopus	551
Oracodon	561	Ornithosauria	506
orbicularis (Platysomus)	369	Ornithosauria	506
orcina (Delphinapterus)	594	Ornithoscelida	482
ordiana (Janassa)	276	Ornithostoma	507, 508
ordinatus (Ectocynodon)	428	Ornithostomatidæ	567
ordinatus (Pariotichus)	428	Ornithostomatinae	507
oregonense (Aceratherium)	644	Ornithotarsus	505
oregonense (Diceratherium)	644	Ornithura	519
oregonense (Orycterotherium)	579	Ornithidæ	295
oregonensis (Aphelops)	644	Orodus	295, 296, 297
oregonensis (Ogmophis)	480	Orohippidæ	608
oregonensis (Rhinoceros)	644	Orohippus	609, 610, 611, 612
oregonensis (Stylomys)	451	Oromeryx	672
oregonensis (Testudo)	451	Oromys	734
oregonus (Larus)	525	Orophosaurus	459
Oreocyon	757	Orotherium	609, 611, 612
Oreodon	665, 666, 667, 668	Orthacanthus	264
Oreodontidæ	662, 664, 665	Orthacodus	302
Oreodontina	665	Orthhyodus	239
oreodontis (Hoplophoneus)	779	Orthocynodon	641
oreodontis (Machærodus)	779	Orthodactylus	547
Oreosaurus	475	orthodon (Palæocœtonus)	490
Oreocardinus	388	Orthognathus	360
orientalis (Discosaurus)	458	Orthopleurodon	289
orientalis (Elasmosaurus)	458	Orthopoda	495, 500
orientalis (Teleopternus)	680	orthopygia (Testudo)	451
ornata (Anosteira)	447	orthopygius (Xerobates)	451
ornata (Anostira)	447	orthostica (Mephitis)	766
ornata (Chelone)	441	ortoni (Onychodus)	363
ornata (Exocampe)	544	Orycterocetus	595
ornata (Lamna)	303	Orycterotherium	578, 579
ornatissima (Eurylepis)	366	osagei (Tetracaulodon)	709
ornatissima (Mecolepis)	366	osborni (Arctosaurus)	492
ornatissima (Haplilepis)	366	osborni (Trigonias)	642
ornatum (Rhabdoderma)	364	osbornianum (Ectocion)	605
ornatum (Schistopleurum)	580	osbornianum (Hyracotherium)	611
ornatus (Acipenser)	371	osbornianus (Eohippus)	605
ornatus (Amblypterus)	365	osbornianus (Oligotomus)	605
ornatus (Catopterus)	370	osbornianus (Orohippus)	611

	Page.	P.	Page.
osbornianus (Phenacodus)	605		
osbornii (Creccoides)	528	paca (Agouti)	734
osculus (Notogoneus)	392	paca (Cælogenyx)	734
Osmeroides	393	paca (Mus)	734
Osmotherium	766	Pachyæna	749
osorum (Bunælorus)	767	pachycephalum (Pomatotherium)	768
osorum (Canis)	767	pachycephalus (Brachypsalis)	768
osorum (Daphenos)	767	Pachycormidæ	378
osseus (Lepisosteus)	877	Pachycyon	776
ossifraga (Pachyæna)	750	pachydaetylum (Spheropezium)	552
ossifragus (Mesonyx)	750	pachydaetylus (Spheropezopus)	552
Osteodermi	338	pachydaetylus (Thenaropus)	552
Osteoglossidæ	393	Pachyodon	589
Osteoglossum	393	pachyodon (Myliobatis)	320
Osteolepidæ	361	pachygnathus (Brachypsalis)	768
Osteolepis	361	Pachylemuridæ	788
Osteopera	734	pachylomus (Emys)	448
Osteopygis	441	Pachynolophus	610, 611, 612, 625
Osteostraci	240	Pachyodon	589
Ostinaspis	297	pachyodon (Myliobatis)	320
Ostracodermi	539	pachyops (Merychippus)	617
Ostracophori	339	pachyops (Plihippus)	617
Otaria	783	pachyops (Protohippus)	617
Otaridæ	783	pachypus (Bathmodon)	698
otaridens (Hemiganus)	573	pachypus (Coryphodon)	699
otaridens (Wortmania)	573	Pachyrhizodontidæ	387, 388
Otocælidæ	429	Pachyrhizodus	387, 393
Otocælus	430	Pachyura	315
Otodus	304, 306	Paciculus	727
Otolithus	408	pacificum (Diceratherium)	644
Otozoum	547	pacificus (Aphelops)	644
onchognathus (Baptosaurus)	468	pacificus (Equus)	623
ovatus (Ischypterus)	376	pacificus (Eporeodon)	667
ovatus (Palæoniscus)	376	pacificus (Euerotaphus)	667
ovatus (Semionotus)	376	pacificus (Rhinoceros)	644
overtoni (Brachysaurus)	471	pacificus (Shastasaurus)	463
Oyibos	687	padanicus (Thlæodon)	565
Ovidæ	687	Pagophilus	785
Ovinæ	687	Palæacodon	794
Ovis	687	Palæaspis	340
ovoidactylum (Spheropezium)	552	palæatlantica (Balæna)	600
ovoidactylus (Spheropezopus)	552	palæatlantica (Balænoptera)	600
ovoidactylus (Thenaropus)	552	palæatlantica (Protobalæna)	600
ovoidea (Eurylepis)	366	palæatlanticus (Rhegnopsis)	600
ovoidea (Haplolepis)	366	Palæchimæra	325
ovoidea (Mecolepis)	366	Palædaphus	352
oweni (Dendrerpeton)	418	Palæictops	739
oweni (Emys)	450	Palæobatis	279, 280
oweni (Pterodactylus)	508	Palæoborus	535
oweni (Testudo)	450	Palæocastor	722
Oxhyæna	756	Palæochærus	657, 658
Oxyæcodon	602	Palæoctonus	490
Oxyæna	756	Palæogale	967
Oxyænidæ	756	Palæolagus	735
Oxyæninæ	756	Palæomeryx	682
Oxyænodon	759	Palæomyxus	323
Oxylænidæ	744	Palæonictidæ	755
Oxylænus	744, 747	Palæonictis	755
oxypogon (Stratodus)	387	Palæoniscida	365
oxyprion (Priscacara)	401	Palæoniscidæ	365
Oxyrhina	304, 305, 306, 307, 313	Palæoniscum	367
oxyrhinoides (Otodus)	306	Palæoniscus	365, 367, 368, 369, 375, 376
oxyrhinus (Lestosaurus)	470	Palæonornis	537
oxyrhinus (Platecarpus)	470	Palæonotidani	300
oxysternum (Agomphus)	445	Palæonyctis	755
oxysternum (Amphimys)	445	Palæophidæ	478
oxytomus (Enchodus)	389	Palæophis	479
		Palæosauropus	548, 791

	Page.		Page.
Palaeosaurus.....	492, 510	parallelus (Grallator).....	515
Palaeoscincus.....	497	parallelus (Ornithichnites).....	545
Palaeoselachii.....	300	parallelus (Orodus).....	295
Palaeosinopa.....	754	parallelus (Petalodus).....	280
Palaeospiza.....	537	Parameryx.....	674, 675
Palaeosyopinae.....	629	Paramys.....	723
Palaeosyops.....	630, 631, 632, 717	Parasaurus.....	456
Palaeotetrix.....	534	Parasuchia.....	509
Palaeoteuthis.....	339	Paraxonia.....	648
Palaeotheca.....	447, 448	Parciasauria.....	426
Palaeotherium.....	613, 636	Parciasauridae.....	429
Palaeotringa.....	527	Parciopithecæ.....	406
Palamopus.....	544, 548, 550	Pariasauria.....	426
palatinum (Praotherium).....	735	Parietis.....	767
palatinus (Lagomys).....	735	paridens (Helodectes).....	429
palatinus (Ochotona).....	735	Paridigitata.....	647
pallasi (Bos).....	687	paridigitatum (Argozoum).....	540
pallidicincta (Cupidonia).....	534	Pariesasaurus.....	429
pallidicinctus (Tympanuchus).....	534	Parietis.....	767
palmaris (Platysomus).....	369	pariagonus (Merychys).....	669
palmaris (Ornithichnites).....	548	Pariostegus.....	423
palmaris (Sauroichnites).....	548	Pariotichidae.....	428
palmeri (Nemorhædus).....	687	Pariotichus.....	428, 429
palmipes (Shepardia).....	551	Parioxys.....	421, 422
paloccidentalis (Ardea).....	531	Paroceras.....	702
paloregonus (Cygnus).....	530	Paronychodon.....	490, 560
paloregonus (Olor).....	530	parva (Emys).....	444
paludosus (Limnohyus).....	631	parvidens (Canis).....	771
paludosus (Palaeosyops).....	630, 631	parvidens (Diastichus).....	395
palustris (Miæcis).....	761	parvidens (Paramys).....	724
palustris (Vulpavus).....	761	parvidens (Scuiravus).....	724
pamphagus (Saurocephalus).....	386	parviloba (Mustela).....	767
Pamphractus.....	343	parviscutatus (Chelone).....	443
pandatum (Amyzon).....	395	parviscutum (Chelone).....	443
pandatus (Cladodus).....	269	parvisquamis (Cercariomorphus).....	417
paniense (Hipparion).....	620	parvitecta (Chelone).....	443
paniense (Hippotherium).....	620	parvitectus (Puppigerus).....	443
paniense (Tricium).....	736	parvivorus (Miæcis).....	761
Panolax.....	736	parvivorus (Viverravus).....	761
panolius (Sciurus).....	719	parvivorus (Vulpavus).....	761
pansus (Castor).....	722	parvulum (Anchitherium).....	617
pansus (Steneofiber).....	722	parvulus (Anthiodus).....	279
Pantodonta.....	696	parvulus (Batrachoidichnites).....	541
Pantolambda.....	696	parvulus (Catopterus).....	370
Pantolambdidae.....	696	parvulus (Cladodus).....	269
Pantolambdina.....	696	parvulus (Ctenacanthus).....	329
Pantolestes.....	648, 649, 650	parvulus (Equus).....	617
Pantolestida.....	648	parvulus (Histiophorus).....	402
Pantolestidae.....	648	parvulus (Hoplonychus).....	329
Pantolestoides.....	648	parvulus (Istiophorus).....	402
Pantosaurus.....	456	parvulus (Merychippus).....	617
Pantotheria.....	563	parvulus (Mesohippus).....	617
Pantylus.....	429	parvulus (Ornithoidichnites).....	541
papillosus (Ptychodus).....	318	parvulus (Orodus).....	295
Pappichthys.....	381	parvulus (Petalodus).....	279
Parabatrachus.....	362	parvulus (Physonemus).....	333
Paracetus.....	596	parvulus (Protohippus).....	617
Paradaphænus.....	772	parvulus (Ptychodus).....	318
paradoxicum (Agriotherium).....	664	parvulus (Redfieldius).....	370
paradoxicus (Protoreodon).....	664	parvulus (Sandalodus).....	289
Paradoxodon.....	762	parvulus (Stenopterosodus).....	289
paradoxus (Hyrachys).....	639	parvum (Cetotherium).....	599
Parahippus.....	616, 617	parvum (Elachoceras).....	705
Parahybodius.....	299	parvum (Otozoum).....	547
Parahyus.....	654	parvum (Uintatherium).....	705
parallelum (Brontozoum).....	545	parvus (Cimolodon).....	560
parallelus (Chomatodus).....	280	parvus (Cimolomys).....	560
parallelus (Dittodus).....	266	parvus (Crocodylus).....	513

	Page.		Page.
parvus (Crucipes)	542	peltatus (Rhineastes)	382
parvus (Deltodus)	292	peltigerus (Elonichthys)	368
parvus (Enchodus)	389	peltigerus (Palæoniscus)	368
parvus (Ichthyodectes)	385	peltoceras (Menodus)	634
parvus (Eomeryx)	664	peltoceras (Titanotherium)	634
parvus (Ischypterus)	376	Peltochelyidæ	452
parvus (Protoreodon)	664, 665	Peltodus	276
parvus (Semonotus)	376	Peltosaurus	475
parvus (Tillomys)	724	pelvidens (Chriacus)	745
Passalacodon	740	pelvidens (Lipodectes)	745
Passeres	536	pelvidens (Pelycodus)	745
Passeriformes	536	Pelycietis	766
Passerine	537	Pelycodus	744, 745, 789
Patriofelis	757, 778	Pelycorapis	399
pattersoni (Cladodus)	269	Pelycorhamphus	597
paucicristatus (Ceratodus)	354	Pelycosauria	430
paucicristatus (Ptyonodus)	354	penetrans (Diplodus)	266
paucicristatus (Sagenodus)	354	penetrans (Dissodus)	266
paucidens (Ceratops)	500	penetrans (Dittodus)	266
paucidens (Deinictis)	780	penetrans (Erisichthe)	379
paucidens (Dinictis)	780	penetrans (Lipodectes)	751
paucidens (Hadrosaurus)	500	penetrans (Protosphyrapena)	379
paucidens (Hemipristis)	373	peninsulatum (Hipparion)	620
paucidens (Hyænodon)	759	peninsulatum (Hippotherium)	620
paucidens (Thinosaurus)	476	peninsulatus (Castor)	722
pauciporus (Orophosaurus)	459	peninsulatus (Steneofiber)	722
pauciradiata (Sauroplesura)	419	pennantii (Martes)	767
pauciradiatus (Asineops)	404	pennantii (Mustela)	767
pauciradiatus (Colosteus)	479	pennatus (Trionyx)	454
paulus (Hypsodus)	789, 791	pennsylvanica (Arvicola)	729
paulus (Hypsodus)	791	pennsylvanicus (Clepsisaurus)	492, 510
Paurodon	569	pennsylvanicus (Clepsysaurus)	492
Paurodontidæ	568	pennsylvanicus (Dicotyles)	659, 661
pealei (Priscacara)	401	pennsylvanicus (Mylohyus)	659
peccari (Aper)	661	pennsylvanicus (Microtus)	729
peccari (Tayassu)	795	pennsylvanicus (Tayassu)	659
Pecora	681	pennsylvanicus (Onchus)	326
pectinata (Sauroplesura)	414	Pentacodon	745
pectinatus (Equus)	624	pentacus (Miocænus)	603
pectinatus (Oestocephalus)	414	pentacus (Protagonodon)	603
pectinatus (Ptyonius)	114	pentagona (Raja)	316
pectinatus (Rhineastes)	382	pentagonus (Diclonius)	504
pectoral (Pleurosternum)	444	pentagonus (Oncobatis)	316
pectoralis (Adocus)	444	pentagonus (Trachodon)	504
pectorosus (Diplomystus)	391	pephero (Tetheodus)	389
Pediocetes	534	pephredo (Tetheodus)	389
Pediocetes	534	Peplorhina	364
Pediomys	565	Peraceras	645, 646
pedunculatus (Clepsydrops)	432	peracutus (Machæracanthus)	332
peiganus (Dysganus)	505	Peralestes	568
pelagius (Squalodon)	589	Peralestidæ	568
Pelargo-herodii	531	perangulatus (Diclonius)	504
Pelargomorphæ	531	perangulatus (Trachodon)	504
Pelecanine	532	Peratheridæ	570
Pelecanoidea	532	Peratherium	570, 571
Pelecanus	532	Peresoces	398
Pelecopteridæ	378	Percherus	657
Pelecopterus	379	Percidæ	404
Pelacorapis	399	Percoidæ	403
Pelion	410, 411	Percoidæ	404
Peliontidæ	410	Percoidæ	404
pellensis (Ctenacanthus)	328	Percomorphi	400
Pelomedusidæ	438	percrassa (Clemmys)	449
Pelonax	654, 655, 656	percrassus (Sardinus)	391
pelorius (Pneumatarthrus)	505	percidica (Galera)	766
pelorius (Pneumatarthrus)	505	percidica (Hemiacis)	766

	Page.		Page.
perdicida (Galictis)	766	Pharyngodopiliidæ	400
perdicida (Mephitis)	766	Pharyngodopilus	401
perdicida (Spilogale)	766	Pharyngognathus	400
perditus (Equus)	617	Phascolestes	569
perditus (Merychippus)	617	Phascolotheriidae	567
perditus (Protohippus)	617	Phascolotheriinae	567
periclorum (Oreodon)	666	Phascolotherium	567
Periodus	373	phaseolinus (Diadectes)	427
Periplectrodus	287	phaseolinus (Empedias)	427
periprion (Ctenodus)	354	phaseolus (Pycnodus)	373
periprion (Sagenodus)	354	Phasganodus	388, 389, 390
Peripristis	281, 282	phasianellus (Pediocetes)	534
Peryptichidae	693	Phasianidae	534
Periptychinae	693	Phenacodontidae	602
Periptychus	693, 694	Phenacodus	603, 604, 605, 650, 716, 791
Perissodactyla	607	philadelphia (Chroicocephalus)	525
Perissonychia	690	philadelphia (Larus)	525
Peritresius	441	Phlaocyon	765
perlatus (Liodon)	472	phlebotomus (Daptinus)	386
perlatus (Tylosaurus)	472	phlebotomus (Saprocephalus)	386
perniciosa (Protosphyraena)	379	phlebotomus (Saurodon)	386
perniciosus (Ichthyodectes)	379	Phlegethontia	411
perniciosus (Pelecopterus)	379	Phlegethontidae	411
pernix (Aletornis)	528	phlegon (Eguus)	617
pernix (Eohippus)	609	phlegon (Merychippus)	617
pernix (Hippidium)	618	phlegon (Protohippus)	617
pernix (Hyracotherium)	609	Phlyctænacanthus	332
pernix (Pliohippus)	618	Phlyctænaspis	345
Peromyscus	726	Phlyctænius	345
Peropoda	479	Phoca	589, 591, 784, 785
perovalis (Antliodon)	279	Phocageneus	591
perovalis (Petalodus)	279	Phocidae	784
perplexus (Omosaurus)	510	Phocodon	588, 589
perrugosus (Bottosaurus)	514	Phocodontia	585
perspicillatus (Phalacrocorax)	533	Phoderacanthus	334
perspicuus (Aetobatis)	321	Phoeodus	270
pertenuis (Ctenoptychius)	282	Phœnicopteri	531
pertenuis (Testudo)	451	Phœnicopteridae	528, 531
pertortus (Pelycorhamphus)	597	Phœnicopterinae	531
petaliferus (Glyptodon)	580	Phœnicopteroidea	531
Petalodontidae	275	Phœnicopterus	531
Petalodontoides	275	Pholidophoridae	383
Petalodopsis	353	Pholidophorus	383
Petalodus	276, 277, 278, 279, 280	Phthinobranchii	396
Petalorhynchus	278	Phyllodidae	400
petersoni (Ectoconodon)	692	Phyllodus	401
petersoni (Protylopus)	675	Phyllolepidae	349
petrinus (Cymbospondylus)	463	Phyllolepis	349
petrodoides (Glymmatacanthus)	331	Phyllophaga	575
Petrodus	297	Physeter	595, 596
petrolei (Emys)	448	Physeteridae	595
petrosa (Emys)	445	Physeterinae	595
petrosus (Adocus)	445	Physeterula	595
petrosus (Agomphus)	445	Physichthys	349
petrosus (Enchodus)	389	Physonemus	333, 334
Phacodus	405	Phytosauria	509
Phalacrocoracidae	533	Phytosauridae	509
Phalacrocoracinae	533	Phytosaurus	509
Phalacrocorax	533	piasaënsis (Polyrhizodus)	283
Phalaropidae	526	Picariae	536
Phalaropus	527	Piciformes	536
Phaneropleuridae	352	Pilosa	535
Phaneropleurini	352	pilulatus (Anticheiropus)	539
Phaneropleuron	352, 353	pilulatus (Cheirotheroides)	541
Phareodon	382, 393	pilulatus (Plesiornis)	550
Phareodus	393	Pimelodus	382

	Page.		Page.
pinetorum (Arvicola)	729	platycephala (Osteopera)	734
pinetorum (Microtus)	729	platycephalum (Aceratherium)	645
pinetorum (Pitymys)	729	platycephalum (Pomatotherium)	768
pinetorum (Psammomys)	729	platycephalus (Rhinoeros)	615
pinnatus (Monocladodus)	272	platyceras (Brontotherium)	635
Pinnipedia	783	platyceras (Menodus)	634, 635
Pipistrellus	742	platyceras (Titanotherium)	634, 635
Piptomerus	457	Platychoeropidae	715
Piratosaurus	456	Platychoerops	715
Pisces	338	platycopis (Deinictis)	780
piscinaria (Lutra)	769	platycopis (Dinictis)	780
piscosus (Cymbospondylus)	463	platycopis (Hoplophoneus)	780
Pithecistes	670, 671	platycopis (Pogonodon)	780
Pitymys	728, 729	platycopsis (Pogonodon)	780
placenta (Helodus)	288	platydactylus (Ornithichnites)	551
placenta (Psephodus)	288	Platygonus	660, 690
Placentalia	563, 571	platylomus (Osteopygis)	441
placidus (Merychippus)	617	Platyodus	290
placidus (Prothippus)	617, 620	platyops (Bothrolabis)	656
Placodermata	342	platyops (Euclastes)	442
Placodermi	342	platyops (Hyotherium)	656
Placodus	373	platyops (Lytoloma)	442, 795
Placoganoidei	342	platyops (Palæochærus)	656
Placoides	262	Platypterna	540, 549
Placoides	262	platypternus (Diacranodus)	265
Placosauridae	474	platypternus (Didymodus)	265
Placosaurus	474	platypus (Eryops)	422
Placothorax	343	platypus (Ichthyacanthus)	422
Plagiaulacida	558	Platyrhachis	477
Plagiaulacidae	558	Platysomatidae	369
Plagiaulacinae	558	Platysomidae	369
Plagiaulacoidea	558	Platysomus	369
Plagiaulax	558	platyspondylus (Baptosaurus)	468
Plagiostomata	263	platyspondylus (Halisaurus)	468
Plagiostomi	262, 263, 275	platyspondylus (Macrosaurus)	468
plainvillensis (Batrachichnus)	541	platyspondylus (Macrospindylus)	468
plana (Oxyrhina)	307	Platystegos	418
plana (Sphyrna)	309	platyrus (Cimoliosaurus)	458
planiceps (Baphetes)	418	platyrus (Elasmosaurus)	458
planiceps (Hyracodon)	641	Platyxystrodus	290
planidens (Deltodus)	292	Plantus	524
planidens (Scylliorhinus)	310	Plectognathi	407
planidens (Scyllium)	310	Plectospondyli	394
planifrons (Clidastes)	470	plectrodon (Heptanchias)	300
planifrons (Entoptychus)	731	plectrodon (Notidanus)	300
planifrons (Lestosaurus)	470	Plectropterna	549
planifrons (Metamynodon)	642	Plectropus	549
planifrons (Platecarpus)	468, 470	plenus (Psammodus)	284
planior (Cimoliasaurus)	459	Plerodon	514
planior (Discosaurus)	459	Plesiartcomys	723, 724
planus (Corax)	309	Plesiocetus	598
planus (Isurus)	307	Plesiocelyidae	439
planus (Stenopteroodus)	291	Plesiocelys	439
Plastomenidae	452	Plesiogale	767
Plastomenus	452, 454	Plesiornis	539, 550
Platacodon	565	Plesiosaui	455
Platanistidae	590	Plesiosauria	455
Platanistinae	590	Plesiosauridae	455
Platax	403	Plesiosaurus	456, 457, 591
Platecarpine	468	Plethodidae	393
Platecarpus	440, 468, 469, 470, 471	Pleuracanthidae	263
Platemys	439	Pleuracanthides	263
Platigonus	660	Pleuracanthus	263, 264, 265, 266, 298
Platinista	590	Pleurocælidæ	482
Platinistida	590	Pleurocælus	483
Platinistinae	590	Pleurodera	486

	Page.		Page.
Pleurodira	436	Polemarchus	550
Pleurodon	514, 577, 578, 579	polemicus (Lembonax)	444
Pleurolieus	731	politus (Antiodus)	279
Pleuropterygia	272	politus (Cladodus)	269
Pleuropterygii	272	politus (Gampbacanthus)	332
Pleuroptyx	417	politus (Helodus)	287, 288
Pleurosternidae	437	politus (Heteracanthus)	332
Pleurosternon	437	politus (Petalodus)	279
Pleurosternum	437, 444	politus (Phæbodus)	270
Pliauchenia	678, 679	politus (Psephodus)	288
plicatile (Hippurion)	620	pollux (Catopsalis)	563
plicatile (Hippotherium)	620	Polycotylinæ	455
plicatilis (Hybocladodus)	271	Polycotylus	457
plicatilis (Oxyrhina)	306	polycypha (Emys)	448
plicatulus (Compsemys)	437	polycypha (Palæotheca)	448
plicatus (Chirox)	557	Polydectes	514
plicatus (Conchodus)	352	Polygonodon	473
plicatus (Orodus)	295	polygyrus (Carcharias)	308
plicatus (Oromeryx)	672	polygyrus (Carcharodon)	308
plicatus (Pappichthys)	381	polygyrus (Ptychodus)	318
plicatus (Piatosaurus)	456	Polymastodon	562, 563
plicifera (Euprotogonia)	603	Polymastodontida	562
plicifera (Protogonia)	603	Polymastodontidae	562
plicodon (Helohyus)	650	Polymastodontinae	562
plicodon (Phenacodus)	650	polymicrodus (Anognius)	393
plicomphala (Janassa)	276	polymicrodus (Beryx)	393
plicomphalus (Peltodus)	276	polymicrodus (Gillieus)	386
Plinthicus	321	polymicrodus (Ichthyodectes)	386
Pliodonta	734	polymicrodus (Osmeroides)	343
Pliogonodon	517	polymorpha (Janassa)	277
pliogyps (Aquila)	536	polymorphus (Tanaodus)	277
Pliohippus	616, 617, 618, 619	polyodon (Crocodylus)	513
Pliolophus	609, 610, 611, 612	polyodon (Diploynodus)	513
Plioparchus	405	Polyodontidae	371
Plioplatecarpus	465	Polygonax	498, 500
Pneumatarthrus	505	Polyphractus	351
pneumaticus (Holops)	516	polyporum (Cetotherium)	599
Pneumatarthrus	505	polyporus (Eschrichtius)	599
Pneumatosteus	376, 377	polyprion (Hybodus)	299
pnigecanthus	334, 335	Polyprotodontia	564
pnigeus (Oracanthus)	334	Polypterus	357
pnigeus (Pnigecanthus)	334	Polyptychodon	515, 587
Podiceps	523, 524	Polyrhizodontinae	275
podiceps (Podolymbus)	524	Polyrhizodus	282, 297, 298
podicipes (Podolymbus)	524	Polythorax	438
Podicipedidae	523	polyzelus (Anchisaurus)	491
Podicipidae	523	polyzelus (Megadactylus)	491
Podicipinae	523	Pomacentridæ	401
Podicipitiformes	523	Pomacentroidea	400
Podicipoidea	523	Pomatotherium	768
Podocnemididae	438	Ponerichthys	346, 347
Podolymbus	524	ponderosa (Bacium)	438
Podopterygia	365	ponderosa (Cutapleura)	441
Poëbrotheriidae	675	ponderosus (Osteopygis)	441
Poëbrotheriinae	675	ponticulus (Polyrhizodus)	283
Poëbrotherium	675, 676	pontifex (Cottus)	406
Pœciliidae	398	Pontobasiliscus	588
Pœcilodus	293	Pontogeneus	587
Pœluotherium	675, 676	Pontoporia	590
Pogonias	405	popoagium (Lambdotherium)	629
pogonias (Edaphosaurus)	433	porcatus (Agabelus)	593
Pogonodon	779, 780	porcinus (Nanolhyus)	658
Poicilopleuron	487, 489, 490	porosus (Polyrhizodus)	283
Poikilopleuron	487	porosus (Psammodus)	284
poledrus (Hoplichnus)	546	porrectus (Ctenodus)	354
polemarchus (Sauroidehnites)	550	porrectus (Naocephalus)	477

	Page		Page.
porrectus (Sagenodus)	354	princeous (Parietis)	767
Portheus	379, 383	princeps (Dactylodus)	283
Porzana	528	princeps (Glyptosaurus)	475
posticus (Heptodon)	625	princeps (Hipparion)	622
posticus (Pachynolophus)	625	princeps (Hippotherium)	622
posticus (Leuciscus)	396	princeps (Holoptychius)	358
posticus (Semotilus)	396	princeps (Hyrachyus)	639
posticus (Squalius)	396	princeps (Mosasaurus)	466
Potamites	452	princeps (Polyrhizodus)	283
potens (Ammodon)	656	princeps (Prochonias)	438
potens (Ctenacodon)	558	princeps (Taphrosphys)	438
potens (Elotherium)	656	princeps (Uintatherium)	702
potens (Megalonyx)	577	Prionace	312
powellianus (Hyopsodus)	791	Prionodon	312, 313
powellii (Deltodus)	292	prisca (Balæna)	599
præcursor (Dibelodon)	711	prisca (Balænoptera)	599
præcursor (Dinichthys)	347	prisca (Palæchimæra)	325
præcursor (Mammut)	711	prisca (Sphyrna)	314
præcursor Ponerichthys)	347	prisca (Zygæna)	314
præcursor (Mastodon)	711	Priscacara	401
præmaxillaris (Dinichthys)	347	prisciformis (Helagras)	481
prænuntia (Janassa)	277	Priscodelphinus	590, 591, 592, 593
prænuntius (Cladodus)	269	priscolatrans (Canis)	776
prænuntius (Tanaodus)	277	priscum (Cetotherium)	599
præstans (Anchitherium)	614	priscum (Nectitherium)	742
præstans (Mesochippus)	614	priscum (Oreodon)	666
præstans (Miohippus)	614	priscus (Apedodus)	359
præstans (Telacodon)	566	priscus (Belodon)	510
Præotherium	735	priscus (Bison)	689
prava (Emys)	444	priscus (Bos)	689
pravus (Adocus)	444	priscus (Chriacus)	745
pravus (Xenodolamia)	309	priscus (Composaurus)	510
precedens (Coniophis)	481	priscus (Dictyorhabdus)	325
precursor (Dinichthys)	347	priscus (Diplodus)	266
Predentata	495	priscus (Dittodus)	266
prehensilis (Protolabis)	678	priscus (Dryolestes)	569
prentis-clarki (Dinichthys)	347	priscus (Ereptodon)	578
pressicorne (Tinoceras)	706	priscus (Eschrichtius)	599
pressicorne (Uintatherium)	706	priscus (Hadrodus)	373
pressicornis (Eobasilæus)	706	priscus (Homacodon)	650
pressic: rnis (Loxolophodon)	706	priscus (Laopteryx)	518
Priacodon	567	priscus (Loxolophus)	745
Pricodon	496	priscus (Megalonyx)	578
pressidens (Enchodus)	389	priscus (Mylognathus)	325
primævus (Canis)	775	priscus (Oreodon)	666
primævus (Drepanodon)	779	priscus (Ovibos)	687, 688
primævus (Homogalax)	627	priscus (Palæosaurus)	510
primævus (H. phlophoneus)	779	priscus (Pantolestes)	650
primævus (Machærodus)	779	priscus (Phytosaurus)	510
primævus (Machairodus)	779	priscus (Pliogonodon)	517
primævus (Megencephalon)	769	priscus (Pontogeneus)	587
primævus (Palæosauropus)	548, 795	priscus (Procyon)	765
primævus (Parietis)	767	priscus (Protochriacus)	745
primævus (Phenacodus)	604	priscus (Siphonocetus)	599
primævus (Sauropus)	548	priscus (Telmatornis)	528
primævus (Systemodon)	687	priscus (Trionyx)	454
Primates	785	prismaticus (Protochærus)	660
primægenius (Elaphas)	714	Pristacanthus	331
primigenius (Elephas)	713	Pristicladodus	270, 271
primigenius (Euelephas)	713	Pristidæ	316
primigenius (Heptranchias)	300	Pristides	316
primigenius (Notidanus)	300	pristinum (Arctotherium)	763
primogenius (Elephas)	714	pristinus (Arctodus)	763
primus (Deltotyphius)	294	pristinus (Bothrolabis)	658
primus (Didymictis)	754	pristinus (Chameleo)	478
primus (Leptaretus)	764	pristinus (Dicotyles)	659

	Page.		Page.
pristinus (Palæochærus)	659	prophylæus (Lembonax)	444
pristinus (Tremaretos)	763	propinqua (Branta)	530
pristinus (Ursus)	763	propinquus (Deltodus)	293
Pristis	316	Propleura	441, 442
pristis (Acanthodes)	273	Propleuride	440
pristis (Acanthoëssus)	273	proprius (Meryeochoerus)	668
Pristodontina	275	propython (Clidastes)	467
pristodontus (Corax)	309	Prorastomide	582
pristodontus (Galeocerdo)	309	Prorastomus	461, 582
pristodontus (Galeus)	309	proriger (Liodon)	472
pristodontus (Squalus)	309	proriger (Macrosaurus)	472
Pristodus	382	proriger (Rhamphosaurus)	472
Proælurina	781	proriger (Rhinosaurus)	472
Proarthri	285	proriger (Tylosaurus)	472
proavitum (Diceratherium)	643	prorops (Belemnioziphius)	597
proavitus (Rhinoeros)	674	prorops (Dioplon)	597
proavus (Grus)	527	prorops (Mesoplon)	597
proavus (Leptotragulus)	674	Proroziphius	597
proavus (Mammut)	711	prorsus (Agathaumas)	499
proavus (Mastodon)	710, 711	prorsus (Triceratops)	499
proavus (Parameryx)	674	Proarthri	285
Proballostomus	394	Proselachii	263
problematicus (Amblyodon)	416	Prosimia	786
problematicus (Diplodus)	267	Prosinopt	788
problematicus (Dissodus)	267	Prospiraxis	338
problematicus (Doliodus)	267	Protagra	479
Proboscidea	706	Protagriochærus	662
proboscidea (Cystophora)	785	Protamia	380, 381
probus (Palæochærus)	657	protaprinus (Homogalax)	627
probus (Percherus)	657	protapirinus (Systemodon)	627
Procamelus	677, 678, 679	Protapirus	627
Procellariidæ	526	Protatoga	401
Procellarioidea	526	Protelotherium	654
Procellarioideæ	526	Protencephala	692
procerus (Ursus)	763	protenus (Didymictis)	755
Procerulus	683	protenus (Limnoeyon)	755
Prochonia	438	protenus (Viverravus)	755
proclivus (Physonemus)	333	Proteosauridæ	462
Proclia	511	Proteosaurus	462
procuspидatus (Colodon)	626	proterus (Aphelops)	646
Procyonodictis	760	proterus (Rhinoeros)	646
Procyon	761	proterva (Cynorea)	589, 659
Procyonide	761	protervus (Squalodon)	589
Procyonina	761	Prothyraodon	640
procyoninum (Helootherium)	612	Protilanotherium	632
procyoninum (Hyracotherium)	612	Protobakana	600
procyoninum (Lambdotherium)	612	Protocamelus	677, 678
procyoninus (Orohippus)	612	Protocatostomus	394
Prodaphneus	760	Protocephali	339
Prodidelphia	563	Protoceras	673
productum (Mammut)	711	Protoceratide	673
productus (Carcharodon)	308	Protoceratina	673
productus (Galeocerdo)	312	Protochærus	660
productus (Mastodon)	711	Protochriacus	744, 745
productus (Stethacanthus)	333	Protodonta	555
productus (Tetrabelodon)	712	Protodus	266
profectum (Aceratherium)	646	Protogaleus	311
profectus (Aphelops)	646	Protogaulus	718
profectus (Protohippus)	617	Protogonia	603, 746
profundus (Aëtobatis)	321	protogonioides (Clænodon)	747
profundus (Champsosaurus)	461	protogonioides (Mioclænus)	747
prognathus (Ichthyodectes)	385	Protogonodon	603, 606
prognathus (Saurocephalus)	385	Protohippus	612, 615, 616, 617, 618, 620
Prohyæna	774	Protolabidæ	676
promicrodon (Uintacyon)	760	Protolabina	676
Propalæomeryx	682	Protolabis	676, 677, 678

	Page.		Page.
Protolambda	692	Pterospheusus	179
Protomeryx	676	Pterygacanthidae	263
Protomyida	723	Ptilodus	559, 560, 561
Protopsalis	757	Ptychodontidae	317
Protoptychidae	730	Ptychodus	317, 318, 379
Protoptychus	730	Ptycholepis	378
Protoreodon	664, 665	Ptyctodontidae	322
Protoreodontinae	664	Ptyctodus	322
Protorohippus	610	Ptyoniidae	414
Protoselene	607	Ptyonius	414
Protosorex	738	Ptyonodus	353, 354, 355
Protosphyraena	379	pucillus (Hemiacodon)	794
Protosphyraenidae	378	pucillus (Homacodon)	650
Protospondyli	378	pucillus (Pantolestes)	650
Protostega	439, 440	puercensis (Champsosaurus)	461
Protostegidae	439	puercensis (Euprotogonia)	603
Prototheria	555	puercensis (Phenacodus)	603
Prototomus	751, 752, 753, 790, 792	puercensis (Tetraclanodon)	603
Protriton	410	Puffinus	526
Protritonidae	410	pugiunculus (Ctenacanthus)	328
Protrigomorphia	718	pugiunculus (Oracanthus)	328
Protungulata	602	pugnax (Loxolophodon)	705
Protylopus	675	pugnax (Tinoceras)	705
proutii (Menodus)	633, 636	pugnax (Uintacyon)	760
proutii (Palæotherium)	636	pugnax (Uintatherium)	705
proutii (Symbolodon)	637	pulcher (Centetodon)	740
proutii (Titanotherium)	636	pulvinulus (Peltodus)	276
Provierra	751, 753	pumilis (Agriochærus)	665
Provierridae	751	pumilis (Allacodon)	557
Provierrini	751	pumilis (Clidastes)	467, 468
proximus (Petalodus)	278	pumilis (Eomeryx)	664, 665
Psammodontidae	284	pumilis (Graculavus)	533
Psammodontinae	284	pumilis (Helohippus)	611
Psammodus	284, 289, 362	pumilis (Janassa)	277
Psammomys	729	pumilis (Lophiodon)	611
Psephodontinae	284	pumilis (Orohippus)	612
Psephodus	285	pumilis (Pachynolophus)	612
Pseudolemuridae	736	pumilis (Protoreodon)	665
Pseudelurus	782	pumilis (Tanaodus)	277
Pseudemys	449	pumilus (Aceratherium)	641, 643
pseudosagittatus (Petalorhynchus)	278	pumilus (Cænopus)	641
Pseudotrionychidae	446	punctatus (Adocus)	444
Pseudotrionyx	393	punctiger (Trionyx)	454
Pseudotrionyx	723, 724	punctolineatum (Ceraterpeton)	414
Psittacodon	324	punctolineatum (Keraterpeton)	414, 415
Psittacotherium	574	punctulatus (Isodectes)	415
Pteranodon	507, 508	punctulatus (Plastomenus)	453
Pteranodontia	506, 507	punctulatus (Tuditanus)	415
Pteranodontidae	507	pungens (Mixodectes)	787
Pteranodontinae	507	pungens (Sinopa)	752
Pteraspidae	339	pungens (Stypolophus)	752
Pteraspis	339	Puppigerus	443
Pterichthyidae	342	pusilla (Balænoptera)	599
Pterichthyodes	343	pusilla (Clupea)	391
Pterichthys	341, 343, 350	pusillum (Cetotherium)	599
Pternodus	265, 270	pusillus (Chomatodus)	280
Pterodactylæ	506	pusillus (Copodus)	285
Pterodactyli	506	pusillus (Ctenodus)	355
Pterodactylidae	506	pusillus (Eschrichtius)	599
Pterodactylinae	506	pusillus (Hemiacodon)	794
Pterodactylus	461, 507, 508	pusillus (Petalodus)	280
Pteromyinae	718	pusillus (Sagenodus)	355
Pteropappi	519	pustulosus (Acantholepis)	332
Pteropelyx	503	pustulosus (Dinichthys)	347
Pterosauri	506	pustulosus (Holoptychius)	358
Pterosauria	506	pustulosus (Petrodus)	298

	Page.		Page.
pustulosus (Spermatodus).....	795	radiatus (Ctenodus).....	351
Putorius.....	767, 768	radiatus (Dipterus).....	351
putorius (Spilogale).....	766	radiatus (Holoptychius).....	359
Pycnodonta.....	372	radiatus (Tuditanus).....	415
Pycnodontes.....	372	Radiolepis.....	360
Pycnodonti.....	372	radulata (Anosteira).....	447
Pycnodontidae.....	372	radulina (Anosteira).....	447
Pycnodontoidea.....	372	radulus (Rhinecastes).....	382
Pycnodus.....	373	radulus (Trionyx).....	454
pygmæa (Didelphis).....	571	Raii.....	315
pygmæa (Didelphys).....	571	Raiidae.....	315
pygmæum (Lophiotherium).....	793	Raja.....	315
pygmæus (Agorophius).....	589	Rajacei.....	315
pygmæus (Antiacodon).....	787, 793	Rajæ.....	315
pygmæus (Basilosaurus).....	589	Rajidae.....	315
pygmæus (Doryodon).....	589	Rallidae.....	528
pygmæus (Hyopsodus).....	793	Ralline.....	528
pygmæus (Sarcolemur).....	793	ramosum (Brontotherium).....	635
pygmæus (Sairocephalus).....	386	ramosum (Elotherium).....	656
pygmæus (Saurodon).....	589	ramosum (Titanotherium).....	635
pygmæus (Squalodon).....	589	ramosus (Cosoryx).....	683
pygmæus (Zuglodon).....	589	ramosus (Dicrocerus).....	683
Pygopodes.....	523	ramosus (Merycodus).....	683
Pygopodiformes.....	523	ramosus (Orodus).....	295, 296
Pygopterus.....	367, 419	ramosus (Pelonax).....	650
Pythonide.....	479	ramosus (Procervulus).....	683
Pythonomorpha.....	464	Rana.....	425
Q.		randalli (Ctenacanthus).....	328
quadrans (Oxyrhina).....	306	randallii (Spiraxis).....	338
quadrata (Janassa).....	276	randallii (Prospiraxis).....	338
quadrata (Testudo).....	451	Rangifer.....	686
quadratidens (Orycterocetus).....	596	Raniceps.....	411
quadratidens (Phlyseter).....	596	Ranidae.....	425
quadratus (Dipterus).....	355	Ranina.....	425
quadratus (Hadrianus).....	450	Rapaces.....	535
quadratus (Manteodon).....	700	rapax (Sinopa).....	752, 753
quadratus (Peltodus).....	276	rapax (Stypolophus).....	752
quadratus (Rhizodus).....	355	rapax (Tylosaurus).....	473
quadratus (Sagenodus).....	355	rapidens (Bolosaurus).....	428
quadripes (Plesiornis).....	550	rapidens (Chilonyx).....	428
quadruplicatus (Aceratherium).....	640	Raptores.....	535
quadruplicatus (Anchisodon).....	640	raricostatus (Cladodus).....	269
quadruplicatus (Hyracodon).....	640	rarus (Allacodon).....	557
quadriseriatus (Orthacanthus).....	264	rarus (Cimolopteryx).....	537
quadriseriatus (Pleuracanthus).....	264	rarus (Menacodon).....	568
Quadrumania.....	787, 786	rarus (Onychodectes).....	573
quadrapedans (Hoplichnus).....	546	rarus (Stenacodon).....	794
quebecensis (Glyptolepis).....	358	rarus (Tapiravus).....	628
quebecensis (Gyrolepis).....	359	Rasores.....	533
quebecensis (Holoptychius).....	358	Ratite.....	522
quincunciatus (Sagenodus).....	355	recta (Macropterna).....	548
Querquedula.....	529	recta (Platypterna).....	549
quinquelateralis (Lamna).....	303	recticonus (Galeocercus).....	311
quinquepedale (Diacium).....	477	recticorne (Ceraterpeton).....	414
quivirensis (Triisodon).....	748	reticulata (Amia).....	381
R.		rectidens (Carcharodon).....	308
Rabdiolopsis.....	360, 363	rectidens (Hipparion).....	620
radians (Otolithus).....	408	rectidens (Hippotherium).....	620
radians (Bathmodon).....	699	rectidens (Myliobatis).....	320
radians (Coryphodon).....	699, 700	rectidens (Oestocephalus).....	414
radians (Dasypatis).....	319	rectidens (Sphenodus).....	302
radians (Heliobatis).....	319	rectiformis (Dimetrodon).....	432
radians (Trygon).....	319	rectus (Acondylacanthus).....	330
radiata (Ischyrrhiza).....	398	rectus (Carcharodon).....	308
		rectus (Dactylodus).....	283
		rectus (Harpedactylus).....	549

	Page.		Page.
rectus (Homacanthus).....	329	rex (Edestosaurus).....	467
rectus (Leptecodon).....	397	rex (Megalneusaurus).....	457
rectus (Marracanthus).....	329	rex (Nanosaurus).....	505
rectus (Mosasaurus).....	473	rex (Platygonus).....	661
rectus (Onchus).....	326	Rhabdoderma.....	363, 364
rectus (Oracanthus).....	335	rhabdodon (Catathlaeus).....	693
rectus (Polygonodon).....	473	rhabdodon (Peryptichus).....	693
rectus (Polyrhizodus).....	283	Rhabdoario.....	392
rectus (Titanichthys).....	348	Rhabdolepis.....	360, 368
recurvatus (Pachyrhizodus).....	388	Rhabdopelix.....	461
recurvicornis (Monoclonius).....	500	Rhabdosteidae.....	590
recurvirostris (Protosphyraena).....	379	Rhabdosteus.....	593
recurvus (Notidanus).....	301	Rhachitomi.....	410, 417
reddingi (Leuciscus).....	396	Rhachitomus.....	421, 422
reddingi (Squalius).....	396	Rhadinacanthus.....	274
redfieldi (Catopterus).....	370	Rhadinichthys.....	367
redfieldi (Redfieldius).....	370	rhacae (Rhineastes).....	382
redfieldianum (Argozoom).....	540	rhambastes (Platyrhachis).....	477
redfieldianus (Argoides).....	540	Rhamphosaurus.....	471, 472
redfieldii (Ornithoidichnites).....	540	rhapheidolabis (Macropetalichthys).....	349
Redfieldius.....	370	rhaphiodon (Lamna).....	303
reflexum (Dinoceras).....	703	rhaphiodon (Odontaspis).....	303, 304
reflexus (Lambdodus).....	271	rhaphiodon (Scapanorhynchus).....	303, 304
regalis (Hesperornis).....	521	Rhegnopsis.....	600
regens (Baromis).....	522	Rhineastes.....	382
regularis (Callognathus).....	338	Rhineura.....	476
regularis (Hybodus).....	299	Rhinocerae.....	462
regularis (Psephodus).....	288	Rhinocerinae.....	647
regularis (Teniodus).....	288, 291	Rhinoceroidea.....	647
regularis (Teniodus).....	288	Rhinoceros.....	636, 641, 643, 644, 645, 646, 647
reiteri (Chirotherium).....	542	Rhinocerotidae.....	642
relictum (Hipparion).....	620	Rhinocerotinae.....	647
relictum (Hippotherium).....	620	Rhinocerotoidae.....	638
relictus (Paranys).....	719	Rhinoptera.....	321
relictus (Sciurus).....	719	Rhinosaurus.....	470, 471, 472
remex (Oestocephalus).....	414	Rhinoraji.....	315
remex (Sauropleura).....	414	Rhipidistia.....	357
renidens (Mylodon).....	579	Rhipidopterygia.....	357
reniforme (Symmorium).....	271	Rhiptoglossa.....	478
repanda (Catapleura).....	441	Rhiptoglossi.....	478
repanda (Propleura).....	441	Rhizodontidae.....	359
repanda (Coryphodon).....	700	Rhizodus.....	354, 355, 359, 360
repandus (Osteopygis).....	441	Rhizopriion.....	589
Reptilia.....	425	rhoadsii (Lutra).....	769
reticulata (Amin).....	381	Rhombodipteridae.....	361
reticulatum (Palæoniscum).....	368	Rhombodipterini.....	361
reticulatum (Schistopleurum).....	581	Rhomboganoidei.....	374
reticulatus (Ctenodus).....	354, 355	rhomboideus (Deltodus).....	289
reticulatus (Eryops).....	422	rhomboideus (Psammodus).....	289
reticulatus (Glyptodon).....	581	rhomboideus (Sandalodus).....	289
reticulatus (Psammodus).....	284	rhynchaenus (Geolabis).....	739
reticulatus (Psephodus).....	288	Rhynchochelones.....	435
reticulatus (Rhizodus).....	355	rhynchosauroidae (Macropterna).....	548
reticulatus (Sagenodus).....	355	Rhynchoselidae.....	515
retroflexa (Oxyrhina).....	306	Rhynchocephalia.....	459
retroversa (Theropleura).....	433	Rhynchodes.....	523
retrusum (Hipparion).....	620	Rhynchodus.....	323
retrusum (Hippotherium).....	620	Rhytidodon.....	509, 510
retusus (Cimolopteryx).....	537	Rhytina.....	584
reversus (Basedon).....	465	Rhytinae.....	584
reversus (Drepanacanthus).....	334	Rhytinea.....	584
reversus (Physonemus).....	334	Rhytinida.....	584
reversus (Xystracanthus).....	334	Rhytinidae.....	584
rex (Cimoliasaurus).....	457	rickseckeri (Erismatopterus).....	404
rex (Clidastes).....	467	ringens (Hypisodus).....	672
rex (Dicotyles).....	661	ringuebergi (Dinichthys).....	347

	Page.		Page.
Rinodus	322	rondeletii (Carcharodon)	308
riparia (Arvicola)	729	rose (Sebastodes)	406
riparius (Anchippodus)	717	Rosmaridæ	783
riparius (Limnocyon)	755	Rosmarus	784
riparius (Telmatoeyon)	755	rosmarus (Dicynodon)	430
riparius (Viverrayus)	755	rosmarus (Odobenus)	784
rivi-petrosi (Cladodus)	269	rosmarus (Odobenus)	784
robusta (Stenogale)	767	rosmarus (Phoca)	784
robustior (Hipposyus)	793	rosmarus (Trichechus)	784
robustior (Notharetus)	793	rostratus (Tomitherium)	788
robustum (Archæotherium)	655	rostratus (Ancodon)	653
robustum (Brontotherium)	635	rostratus (Ancodus)	653
robustum (Elotherium)	655	rostratus (Bothrolabis)	658
robustum (Hippidium)	618	rostratus (Phytosaurus)	510
robustum (Menotherium)	792	rostratus (Rhytidodon)	510
robustum (Oreodon)	666	rotundiceps (Cladodus)	272
robustum (Rhabdoderma)	364	rotundus (Anogmius)	393
robustum (Titanotherium)	635	rotundus (Thryptodus)	393
robustum (Uintatherium)	702, 703	rudis (Glymmatacanthus)	331
robustus (Achænodon)	654	rüttimeyeranus (Chriacus)	762
robustus (Anthiodus)	279	rüttimeyeranus (Mioclanus)	762
robustus (Argoides)	540	rüttimeyeranus (Paradoxodon)	762
robustus (Brontops)	635	rufus (Felis)	783
robustus (Canis)	776	rufus (Felis)	782, 783
robustus (Ceratodus)	356	rufus (Lynx)	783
robustus (Cladodus)	268, 269, 270	rugatum (Mastodon)	709
robustus (Cœlacanthus)	364	rugatus (Ziphacodon)	761
robustus (Daphænus)	772	rugosidens (Mammut)	712
robustus (Daphænus)	772	rugosidens (Mastodon)	712
robustus (Dipriodon)	561	rugosum (Holonema)	350
robustus (Eohyus)	651	rugosus (Scyllium)	310
robustus (Histioophorus)	402	rugosus (Chitinodus)	293
robustus (Hoplophoneus)	779	rugosus (Crocodylus)	513
robustus (Hydrochærus)	734	rugosus (Crocodylus)	513
robustus (Ischypterus)	376	rugosus (Emys)	448
robustus (Istiophorus)	402	rugosus (Glyptosaurus)	475
robustus (Lambdodus)	271	rugosus (Helodus)	287
robustus (Laopithecus)	792	rugosus (Myliobatis)	320
robustus (Larus)	525	rugosus (Pœcilodus)	293
robustus (Limnocyus)	630, 631	rugosus (Polyptychodon)	513
robustus (Meniscoœsus)	561	rugosus (Psammodus)	284
robustus (Morosaurus)	483	rugosus (Pterichthys)	350
robustus (Mylocyprinus)	396	rugosus (Scylliorhinus)	310
robustus (Oreodon)	666	rugosus (Thecachampsæ)	513
robustus (Ornithichnites)	540	Ruminantia	681
robustus (Pachycyon)	776	rupertianus (Elephas)	709
robustus (Palæosyops)	631	ruschenbergi (Delphinapterus)	592
robustus (Paramys)	724	ruschenbergi (Priscodelphinus)	592
robustus (Perchærus)	657	ruschenbergi (Tretosphys)	592
robustus (Petalodus)	279	rusticus (Goniacodon)	748
robustus (Pliohippus)	618	rusticus (Merychyus)	668
robustus (Procamelus)	677, 678	rusticus (Merycochærus)	668
robustus (Protolabis)	678	rusticus (Mioclanus)	748
robustus (Pycnodus)	373	rusticus (Trisodon)	748
robustus (Semionotus)	376	Rutilus	395
robustus (Thinohyus)	657	Rutiodon	509, 510
robustus (Thinohyus)	657	ryderanus (Agriochærus)	664
robustus (Tinodon)	567	ryderanus (Coloreodon)	664
robustus (Venustodus)	287	Rytina	584
robustus (Xiphias)	402		
Rodentia	711		
rogersianus (Palamopus)	548	sabinii (Xema)	525
rogersianus (Sillimanus)	548, 551	Saccomyidæ	730
rogersi (Ornithoidichnites)	543	sacheri (Odontaspis)	313
rogersii (Hyposaurus)	516	sævus (Ælurodon)	774
romingeri (Cladodus)	269	sævus (Canis)	774

	Page.		Page.
Sagenodus.....	353, 419	Schistodelta.....	728
salamandroides (Diplocaulus).....	416	Schistopleurum.....	580, 581
Salicetia.....	421	schlosserianus (Chriacus).....	745
Salmonei.....	392	schlosserianus (Epichriacus).....	745
Salmones.....	392	schucherti (Hadrianus).....	450
Salmonidæ.....	387, 392	schucherti (Pterosphenus).....	479
sanctæfidei (Panolax).....	736	Scianidæ.....	405
sancti-ludovici (Asteroptychius).....	330	Scianoidea.....	405
sancti-ludovici (Deltodopsis).....	291	Scianoidei.....	405
sancti-ludovici (Pœcilodus).....	293	scitulus (Agassizodus).....	296
Sandalodus.....	288, 289, 290, 292	scitulus (Campodus).....	296
Saniva.....	475	scitulus (Orodus).....	296
Saniwa.....	475	Sciuravus.....	723, 724
saponensis (Champsosaurus).....	461	Sciuridæ.....	718
Sarcolemur.....	793	Sciurinae.....	719
sarcophagus (Zatomus).....	490	Sciurini.....	719
Sarcothraustes.....	748	sciuroides (Paramys).....	724
sarcululus (Anthiodus).....	279	sciuroides (Plesiaretomys).....	724
sarcululus (Petalodus).....	279	Sciurodon.....	718
Sarcura.....	315	Sciuromorpha.....	718
Sardinus.....	394	Sciurormys.....	725
sargenti (Lithophis).....	479	Sciurospalacoides.....	730
Sauranodon.....	463	Sciurus.....	719
Sauranodonta.....	461	Sclerodermi.....	407
Sauranodontidæ.....	463	sclerops (Pappichthys).....	381
Sauria.....	473	Scolcephagus.....	537
sauriformis (Apsopelix).....	390	Scolopacidae.....	526
Saurii.....	474	Scolopacinae.....	526
Sauripteris.....	361	Scolopacoidea.....	526
Sauripterus.....	361	Scolopacoideæ.....	526
Sauritolepis.....	361	Scolopax.....	527
Saurischia.....	482, 487	scolopax (Belodon).....	510
Saurocephalidæ.....	383	scolopax (Phytosaurus).....	510
Saurocephalinae.....	385	Scombroidea.....	402
Saurocephalus.....	379, 384, 385, 390	Scorpeni.....	406
Saurocetus.....	588	Scorpenidæ.....	406
Saurodipteridæ.....	361	Scorpenoidea.....	406
Saurodipterini.....	361	scotti (Alces).....	685
Saurodon.....	385, 386, 390	scotti (Equus).....	624
Sauroidontidæ.....	378, 383, 385	scotti (Prodaphenus).....	760
saurognathus (Dissacus).....	749	scottianus (Microsypops).....	791
Sauroidichnites.....	538, 541, 548, 549, 550, 553	serofa (Sus).....	661
Sauropleura.....	414, 415, 419	sculpta (Janassa).....	277
Sauropleuridæ.....	419	sculptus (Ctenacanthus).....	328
Sauropoda.....	482	sculptus (Halodon).....	561
Sauropterus.....	361	sculptus (Meniscoëssus).....	561
Sauropterygia.....	455	sculptus (Tanaodus).....	277
Sauropus.....	548, 550	scutata (Amia).....	381
Saururæ.....	518	scutellata (Sauropleura).....	419
sauvageanus (Mioplosus).....	405	scutellatus (Colosteus).....	419
sayrei (Glyptopomus).....	362	scutellatus (Pygopterus).....	419
scalare (Herpetotherium).....	571	scutigerum (Palmoniscum).....	368
scalare (Peratherium).....	571	scutigerus (Palmoniscus).....	368
scalaris (Didelphis).....	571	scutumantiquum (Trionyx).....	454
scalaris (Didelphys).....	571	Seyllæmus.....	399
Scalops.....	738	Seyllia.....	310
scalper (Megalonyx).....	578	Seylliidæ.....	310
scalper (Taniolabis).....	562	Seylliolaunniidæ.....	310
scambus (Anomœpus).....	539	Seylliorhinidæ.....	310
Scansores.....	536	Seylliorhininae.....	310
Scapanorhynchus.....	303, 304	Seylliorhinus.....	310
Scaphaspis.....	339	Seyllium.....	310
Scapherpeton.....	421	Seymni.....	314
Scaphorhynchus.....	371	Seymuidæ.....	314
Scaumenacia.....	353	Seymnoideæ.....	314
Schastasaurus.....	463	Seymnorhinus.....	314

	Page.		Page.
Scymnus	314	septentrionalis (Glyptodon)	581
Sebastodes	406	serialis (Plastomenus)	453
secans (Pantolestes)	649	sericeus (Phareodus)	393
secans (Rhynchodus)	323	sericodon (Crocodylus)	513
secans (Trigonolestes)	649	sericodon (Thecachamps)	513
sector (Otolithus)	409	serotinum (Titanotherium)	634
sectorius (Anisonehus)	695	serotinus (Allops)	634
sectorius (Hyænocyon)	770	serotinus (Megacerops)	634
sectorius (Liodon)	472	serotinus (Menodus)	634
sectorius (Mioclanus)	695	serotinus (Nyctilestes)	742
sectorius (Tylosaurus)	472	serpens (Phlegethontia)	411
secundaria (Sinopa)	752	Serpentes	478
secundarius (Prototomus)	752	serpentina (Chelydra)	446
secundarius (Stypolophus)	752	serpentinus (Elasmosaurus)	458
securis (Petalodus)	278	serra (Acrodbatis)	310
sedens (Ornithomimus)	494	serra (Ginglymostoma)	310
seeleyanus (Hypsirophus)	496	serra, (Hemipristis)	313
seeleyanus (Stegosaurus)	496	serrata (Gnathorhiza)	355
segne (Uintatherium)	702	serrata (Eurylepis)	366
segnis (Asthenodon)	570	serrata (Haplolepis)	366
segnis (Chamops)	174	serrata (Mecolepis)	366
segnis (Ditetrodon)	702	serrata (Priscacara)	401
sejunctus (Merychippus)	618	serrata (Sphyrna)	314
sejunctus (Protohippus)	616, 618	serrata (Thecachamps)	513
Selachia	274	serratus (Callognathus)	338
Selachia	275	serratus (Cimolomys)	560
Selachii	262, 274	serratus (Crocodylus)	513
Selachioidei	275	serratus (Ctenacodon)	559
Selenacodon	560, 561	serratus (Ctenodus)	555
Selenichnus	551	serratus (Dorodon)	587
Selenodonta	681	serratus (Doryodon)	587
selenodus (Polymastodon)	563	serratus (Eurylepis)	366
selliformis (Chomatodus)	280	serratus (Exostinus)	476
sellowi (Glyptodon)	580	serratus (Halodon)	560
selluliformis (Lisgodus)	281	serratus (Lisgodus)	281
selwynianum (Brontotherium)	635	serratus (Myliobatis)	320
selwynianum (Titanotherium)	635	serratus (Sagenodus)	355
selwynianus (Menodus)	635	serratus (Thecachamps)	513
semianiceps (Cimolichthys)	387	serratus (Triceratops)	499
semianiceps (Emps)	387	serratus (Zatrachys)	422
semicinctus (Bathmodon)	700	serridens (Belodon)	510
semicinctus (Coryphodon)	699, 700	serridens (Eurydorus)	510
semicinctus (Leptomeryx)	672	serridens (Mammut)	712
semicinctus (Loxolophodon)	700	serridens (Mastodon)	710, 712
semicircularis (Ctenoptychius)	282	serridens (Phytosaurus)	510
semicircularis (Peripristis)	282	serridens (Tetrabelodon)	712
semicostatus (Anaclitacanthus)	328	serrifer (Toxochelys)	442
semicylindricus (Psammodus)	289	serrula (Oestocephalus)	415
semihians (Homogalax)	627	serrula (Ptyonius)	415
semihians (Systemodon)	627	serrulatus (Holoptychius)	359
Semionotidae	374	serus (Dicotyles)	659
Semionotus	375	serus (Dinobatis)	781
semipalmatus (Alces)	685	serus (Protomeryx)	676
semipalmatus (Cervus)	685	serus (Tayassu)	659
semiplicatus (Equus)	624	sesquipedalis (Mylagaulus)	721
semiradicatus (Dimetrodon)	432	seversum (Hipparion)	621
semiserratus (Carcharodon)	307	seversum (Hippotherium)	620, 621
semistriatus (Acanthodes)	273	seversus (Stylonus)	621
semistriatus (Acanthoëssus)	273	sexcepis (Synconodon)	692
semistriatus (Enchodus)	389	sexspinosus (Plioplarchus)	405
semistriatus (Phasganodus)	389	Shastasaurus	463
Semotilus	396	shaughnessiana (Emys)	448
senex (Moropus)	691	sheareri (Oreardinus)	388
senex (Thillomys)	724	sheareri (Pachyrhizodus)	388
septaria (Emys)	448	sheari (Pachyrhizodus)	388
septemspinosus (Plioplarchus)	405	shepardi (Dibelodon)	712

	Page.		Page.
shepardi (Mammut)	712	simplicidens (Equus)	618
shepardi (Mastodon)	710, 712	simplicidens (Pliohippus)	618
shepardi (Tetrabelodon)	712	Simplicidentata	718
shepardi (Tetracaulodon)	710, 712	simum (Aretotherium)	763
Shepardia	551	simus (Arctodus)	763
sheppardianus (Charadrius)	526	simus (Bathmodon)	699
sherwoodi (Ctenodus)	352	simus (Coryphodon)	699
sherwoodi (Dipterus)	352	simus (Cyclopidius)	671
sherwoodi (Gyracanthus)	335	simus (Lestosaurus)	470
shirleyensis (Plesiosaurus)	456	simus (Platecarpus)	470
shoshonense (Titanotherium)	633	simus (Spaniodon)	391
shoshonensis (Catostomus)	394	simus (Tremarctos)	763
shoshonensis (Deodon)	633	sinclairii (Hipparion)	621
shumardii (Enchodus)	389	sinclairii (Hippotherium)	621
Sicarius	278	singularis (Coryphodon)	700
sicarius (Crocodylus)	513	singularis (Heptodon)	625
sicarius (Thecachampsia)	513	singularis (Hyrachyus)	625
siderius (Asteracanthus)	331	singularis (Pachynolophus)	625
siderius (Bythiacanthus)	331	Sinopa	751, 752, 753, 788
sideropelius (Diadectes)	427	sinosus (Ambloctonus)	756
Sigmodontes	726, 727	sinosus (Amblyctonus)	756
Sigmodontina	726	sinuatus (Cladodus)	272
sigmodus (Arvicola)	728	sinuatus (Cladoselache)	272
sigmodus (Microtus)	728	Siphonocetus	599
sigmodus (Pitymys)	728	siphunculus (Mesocetus)	600
Sigmogomphius	722	Sirenia	582
sigmoides (Onychodus)	363	Sirenidae	353, 355
sillimani (Brontozoum)	543	sirenoides (Prorostomus)	582
sillimani (Hydrarchos)	587	Sirenoidei	353
sillimani (Ornithoidechnites)	543	Sironectes	468
sillimanii (Isurus)	307	Smilerpeton	413
sillimanii (Oxyrhina)	307	Smilerpetum	413
sillimanium (Brontozoum)	543	Smilodon	778, 780, 781
Sillimanius	548, 551, 552	smithii (Rhineastes)	382
silovianus (Dictyodus)	399	smithsonianus (Larus)	525
silovianus (Sphyrænodus)	399	smoekii (Edaphodon)	324
Siluridae	282	smoekii (Ischyodus)	324
Siluroidei	351	snoviana (Testudo)	451
Simæodosauria	460	snovianum (Caryoderma)	451
Simæodosaurus	460	snovii (Cimoliasaurus)	459
similis (Antliodus)	279	snyderi (Anomodon)	741
similis (Ctenacanthus)	328	sociale (Meniscotherium)	606
similis (Otolithus)	408	socialis (Eporeodon)	667
similis (Petalodus)	279	socialis (Hyracops)	606
similis (Vaticinodus)	290	socialis (Palæochærus)	657
Simocyonidæ	770	socialis (Perchærus)	657
Simocyoninæ	770	socialis (Thinohyus)	657
simplex (Antliodus)	279	socialis (Tinohyus)	657
simplex (Calamodon)	574	sodalis (Aquila)	536
simplex (Chriacus)	744	sodalis (Myiodon)	579
simplex (Clastes)	377	solaris (Crocodylus)	513
simplex (Lepisosteus)	377	solidula (Diphryssa)	325
simplex (Oxyclænus)	744	solidulus (Edaphodon)	325
simplex (Petalodus)	279	solidulus (Ischyodus)	325
Simplex (Platyxystrodon)	290	Solidungula	608
simplex (Protapirus)	628	solus (Anchisaurus)	491
simplex (Protochriacus)	744	Somniosidæ	314
simplex (Stemmatias)	298	sophiæ (Phæbodus)	270
simplex (Stemmatodus)	298	sopita (Propleura)	441
simplex (Stylinodon)	574	sopita (Chelone)	441, 442
simplex (Vaticinodus)	290	sopitus (Osteopygis)	441
simplex (Xenodolamia)	309	Sorex	738
simplex (Xystrodon)	290	Soricidæ	738
simplicidens (Aceratherium)	643	Spalacotheriidae	566, 567
simplicidens (Blarina)	738	Spalacotheriinae	567
simplicidens (Cænopus)	643	Spalacotherium	567

	Page.		Page.
Spaniodon	391	sphenops (Diplocynodus)	514
Sparidae	405	sphenops (Plerodon)	514
Sparodus	411	Sphenosaurus	515
Sparoidæ	405	Spheropezium	552
Sparoidei	405	Spheropezopus	552
Spatula	529	Sphyraena	389, 399, 400
spatula (Plianchenia)	680	Sphyrenidæ	399
Spatularia	371	Sphyrenodus	399
spatularius (Esthonyx)	716	Sphyrenoidæ	399
spatulatus (Deltodus)	293	Sphyrna	309, 314
spatulatus (Liognathus)	345	Sphyrnidæ	314
spatulatus (Lispognathus)	345	Sphyrninæ	314
spatulatus (Petalorhynchus)	278	spierianus (Microsops)	791
spatulatus (Sandalodus)	289	Spilogale	766
speciosa (Cotylops)	666	Spinacidæ	314
speciosa (Rabdiolepis)	360	spinous (Belosphys)	592
speciosa (Radiolepis)	360	spinous (Cladodus)	269
speciosa (Sphyraena)	399	spinous (Ixacanthus)	592
speciosum (Hipparion)	621	spinous (Priscodelphinus)	592
speciosum (Hippotherium)	621	Spiraxis	338
speciosus (Ctenacanthus)	328	splendus (Cladodus)	269
speciosus (Hippodon)	621	sponsa (Aix)	529
speciosus (Mesacodon)	794	Sporetodus	317
speciosus (Dictyodus)	399	springeri (Chitinodus)	293
speciosus (Sphyrenodus)	399	springeri (Cladodus)	269
spectabilis (Ctenacanthus)	328	springeri (Deltotychius)	294
spectabilis (Leptochoerus)	657	springeri (Phœbodus)	270
spectans (Hippidion)	619	springeri (Pœclodus)	293
spectans (Hippidium)	619	springeri (Pristicladodus)	270
Spectans (Pliohippus)	619	springeri (Psammodus)	285
speirianum (Tinoceras)	705	springeri (Pternodus)	270
speirianum (Uintatherium)	705	Squalacei	275
speirianus (Loxolophodon)	705	Squali	275
speirianus (Microsops)	791	squaliceps (Hypopnous)	429
speleum (Osmotherium)	766	Squalidæ	275
spelæus (Myxophagus)	765	squalidens (Daptophilus)	780
speleum (Auloxodon)	577	squalidens (Deinictis)	780
speleus (Odocoileus)	684	squalidens (Diniictis)	780
speothen (Arvicola)	729	Squalius	396
speothen (Isodelta)	729	Squalodon	588, 589, 590, 591
speothen (Microtus)	729	Squalodontidæ	588
Spermatodus	725	Squaloidæ	314
sphærodactylus (Thenaropus)	552	Squalus	304, 307, 308, 309
Sphærodontes	374	Squamata	463
Sphærodontidæ	374	squamifrons (Asineops)	404
Sphæropezium	552	Squamipinnes	400
Sphagepœa	325	squamipinnis (Oligoplarchus)	405
Sphargida	436	squamosus (Gampsacanthus)	336
Sphargide	436	squankensis (Crocodylus)	513
Sphargididæ	436	squankensis (Thecachampsæ)	513
Sphargis	436	Stagodon	561
Sphenacanthus	574	Stagodontidæ	561
Sphenacodon	434	stantoni (Cœlodus)	373
Sphenacodontidæ	431	stavelianus (Crocodylus)	513
sphenocerus (Agathaumas)	500	Steganopoda	532
sphenocerus (Monoclonius)	500	Steganopodes	532
Sphenocelus	691	Steganopus	527
Sphenodon	460	Stegocephali	409, 410, 417
sphenodon (Glyptosaurus)	475	Stegodon	712
sphenodon (Megalonyx)	573	Stegomus	511
Sphenodus	302	Stegosauri	495
sphenodus (Hipparion)	621	Stegosauria	495
sphenodus (Hippotherium)	621	Stegosauridæ	495
Sphenonchus	299	Stegosauroidæ	495
Sphenophorus	337, 338	Stegosaurus	495
sphenops (Diplocynodus)	514	stellatus (Batacanthus)	334

	Page.		Page.
stellatus (Cosmacanthus)	330	strenuus (Taphrosphys)	438
stellatus (Deltodus)	292	Strepsodus	351, 360
stellatus (Drepanacanthus)	334	Streptostylia	463
stellatus (Geisacanthus)	330	striatula (Zygoramma)	445
stellatus (Physonemus)	333	striatulus (Diplacanthus)	274
stelleri (Eumetopias)	783	striatus (Boiosaurus)	434
stelleri (Otaria)	783	striatus (Cladodus)	270
stelleri (Rhytina)	584	striatus (Diplacanthus)	274
Stemmatias	298	striatus (Diplodus)	266
Stemmatodus	298	striatus (Dittodus)	266
Stenacanthus	343, 344	striatus (Docodon)	568
Stenacodon	794	striatus (Pantosaurus)	456
Steneofiber	722	striatus (Parasaurus)	456
stenobryus (Edaphodon)	325	striatus (Petalorhynchus)	278
stenobryus (Ischyodus)	325	striatus (Platygonus)	661
stenocephalus (Asterosteus)	349	Striges	536
stenocephalus (Enhydrocyon)	770	Strigidae	535, 536
Stenodaelytus	551	strigidens (Hoplophonus)	779
stenodon (Plinthicus)	321	strigidens (Machærodon)	779
stenodon (Tinosaurus)	476	Strigilina	375, 376
Stenogale	767	strigilina (Janassa)	276
Stenognathus	348	striolata (Eurylepis)	366
stenognathus (Protagonodon)	603	striolata (Haplolepis)	366
stenops (Chriacus)	745	Struthionide	522
stenops (Clidastes)	467	struthionides (Palæonornis)	537
stenops (Edestosaurus)	467	Stylacodon	569
stenops (Hypsirophus)	496	Stylacodontidæ	569
stenops (Loxolophodon)	705	Stylemys	439, 450
stenops (Stegosaurus)	496	Stylinodon	574
stenops (Tetheopsis)	705	Stylinodontia	572
stenops (Tinoceras)	705	Stylinodontidæ	573
stenops (Uintatherium)	705	Stylodon	569
stenopsis (Cionodon)	504	Stylodontes	374
Stenopterodus	291	Stylodontidæ	370, 374, 569
stenopus (Cladodus)	270	Stylonus	619, 620, 621
Stenorhynchus	785	Stypolophus	739, 751
stenus (Belosphys)	593	Styptobasis	272
stenus (Ixacanthus)	593	subæquans (Bothrolabis)	658
stenus (Priscodelphinus)	593	subæquans (Hyotherium)	658
Stephanodon	768	subæquans (Palæochærus)	658
Stereodectes	720	subauriculatus (Carcharodon)	308
Stereognathidæ	558	subcrenatus (Galeocerdo)	312
Stereospondyli	417	sublavis (Eurythorax)	416
Sterna	525	sublunata (Janassa)	277
sternbergii (Gomphotherium)	676	sublunatus (Taniodus)	277
sternbergii (Hedronchus)	326	subquadrata (Euprotogonia)	603
sternbergii (Poëbrotherium)	676	subquadrata (Protogonia)	603
sternbergii (Protomeryx)	676	subquadratus (Coryphodon)	700
Steropezoum	551, 552	subquadratus (Manteodon)	700
Steropoides	551	subquadratus (Tetraclænodon)	603
Sterrobolophus	499	subteres (Orodus)	296
stertzeri (Dinichthys)	346	subtrigonus (Miocænus)	746
Stethacanthus	333	subtrigonus (Tricentes)	746
stevensoni (Ctenoptychius)	282	subulata (Glyphis)	313
stevensoni (Emys)	448	subulata (Lamna)	303
stevensoni (Herpetotherium)	571	subulatus (Cladodus)	270
stevensonianus (Emys)	447, 448	subulatus (Crocodylus)	513
Stibarus	672	subulatus (Diploecynodus)	513
strangulatus (Diastichus)	395	subulatus (Ichthyosuchus)	513
strata (Isocampe)	546	Subursi	761
Stratodontidæ	387	successor (Mastodon)	712
Stratodus	387	succinctus (Cladodus)	270
Strenua (Sinopa)	752	Suchoprius	490
strenuus (Prochonas)	438	Suidæ	653
strenuus (Prototomus)	752	Suinæ	661
strenuus (Stypolophus)	752, 753	Sulu	532

	Page.		Page.
sulcata (Lamna)	304	sylvaticus (Orohippus)	612
sulcata (Schistodelta)	728	sylvaticus (Pachynolophus)	612
sulcata (Taxidea)	765	sylvaticus (Phliolophus)	612
sulcatus (Antliodus)	279	sylvestre (Dromatherium)	555
sulcatus (Androdemus)	489	sylvestris (Agathaumas)	498
sulcatus (Centemnodon)	510	sylvestris (Glyptosaurus)	475
sulcatus (Cimolichthys)	387	sylvestris (Harpalodon)	761
sulcatus (Helodus)	287	Symborodon	635, 636, 637
sulcatus (Holomeniscus)	679	symmetricus (Psephodus)	288
sulcatus (Labrosaurus)	489	symmetricus (Stemmatias)	298
sulcatus (Leptotragulus)	674	symmetricus (Stemmatodus)	298
sulcatus (Macharacanthus)	332	Symmorion	27
sulcatus (Otolithus)	108	Symphypoda	487
sulcatus (Palæosaurus)	510	Symphypophus	484
sulcatus (Parameryx)	674	symphysis (Pappichthys)	581
sulcatus (Petaldodus)	279	Syneconodon	692
sulcatus (Phenacodus)	605	Syntognathi	397
sulcatus (Platymys)	439	Synoplotherium	750
sulcatus (Prochonia)	439	Syntegmodus	390
sulcatus (Stegosaurus)	496	syntheticus (Adocus)	444
sulcatus (Taniolabis)	562	Synthetodus	356
sulcatus (Taphrophys)	439	Systemodon	608, 610, 627
sulcatus (Triceratops)	499	Systemodontinæ	608, 627
sulcidens (Carcharodon)	308		
sulcidens (Myiodon)	579		
sulcidens (Suchoprion)	490		
sulciferus (Crocodylus)	513		
sulcifrons (Pleurolicus)	731		
Sulidæ	532		
sullivanti (Agassichthys)	349		
sullivanti (Macropetalichthys)	349		
Suoidea	653		
superbum (Elotherium)	655, 656		
superbus (Eporeodon)	668		
superbus (Eucrotaphus)	668		
superbus (Meleagris)	534		
superbus (Merycochoerus)	668		
superbus (Oreodon)	668		
superbus (Paranys)	724		
superciliosum (Aceratherium)	646		
superciliosum (Peraceras)	646		
superciliosum (Teleoceras)	646		
superciliosus (Belodon)	510		
superciliosus (Phytosaurus)	510		
superciliosus (Rhinoceros)	646		
supremus (Camarsaurus)	486		
supremus (Hadrohyus)	671		
supremus (Merychippus)	618		
supremus (Protohippus)	618		
surgens (Heleura)	546		
surinamensis (Hydrochelidon)	525		
sursiplana (Balæoptera)	600		
Sus	659, 661, 660		
syceras (Menodus)	633		
syceras (Titanotherium)	633		
Sycium	728		
sydenensis (Palæosauropus)	548		
sydenensis (Sauropus)	548		
Syllæmus	399, 795		
Syllomus	142		
Syllophodus	725		
sylvaticum (Hyracotherium)	612		
sylvaticum (Lophiotherium)	611, 612		
sylvaticum (Orotherium)	611		
sylvaticus (Lepus)	736		
sylvaticus (Pachynolophus)	612		
sylvaticus (Phliolophus)	612		
sylvestre (Dromatherium)	555		
sylvestris (Agathaumas)	498		
sylvestris (Glyptosaurus)	475		
sylvestris (Harpalodon)	761		
Symborodon	635, 636, 637		
symmetricus (Psephodus)	288		
symmetricus (Stemmatias)	298		
symmetricus (Stemmatodus)	298		
Symmorion	27		
Symphypoda	487		
Symphypophus	484		
symphysis (Pappichthys)	581		
Syneconodon	692		
Syntognathi	397		
Synoplotherium	750		
Syntegmodus	390		
syntheticus (Adocus)	444		
Synthetodus	356		
Systemodon	608, 610, 627		
Systemodontinæ	608, 627		

	Page.		Page.
Tarandus.....	686	tenuicristatus (Venustodus)	287
tarandus (Cervus).....	686	tenuirostris (Ichthyotringa)	397
tarandus (Rangifer)	686	tenuirostris (Microconodon)	556
Tardigrada.....	575	tenuis (Asteroptychius)	330
Tarsiidae.....	786	tenuis (Batodon).....	565
Tarsiina.....	786	tenuis (Carcharias).....	313
Tarsodactylus.....	552	tenuis (Carcharhinus)	313
tau (Equus).....	624	tenuis (Grallator)	545
Taurus.....	690	tenuis (Ornithoidichnites)	549
Tautoga.....	401	tenuis (Ornithomimus)	494
Taxcopoda.....	601	tenuis (Platypterna)	549
Taxidea.....	765	tenuis (Prionace).....	313
Taxistia.....	357	tenuis (Prionodon).....	313
taxoides (Elurodon).....	774	tenuis (Protosphyrapna).....	379
Taxotherium.....	758	tenuissimus (Harpedactylus)	545
taxus (Taxidea).....	765	tenuitectus (Bolbodon)	427
Taxymys.....	724	teres (Cosoryx).....	683
Tayassu.....	659, 795	teres (Dicrocerus).....	683
Tayassuinae.....	658	teres (Iguanavus).....	474
taylori (Bothriolepis)	361	teres (Merycodus).....	683
taylori (Holoptychius).....	361	terrærubra (Meniscotherium)	605
taylori (Sauripteris).....	361	Terrapene.....	419
taylori (Sauripterus).....	361	Terrapenidae.....	447
taylori (Sauropterus).....	361	terrelli (Cladodus)	270
Tectospondyli.....	314, 315	terrelli (Dinichthys)	347
tectulus (Holeodus).....	471	terrelli (Myllostoma)	350
tectulus (Lestosaurs).....	471	terrelli (Ponerichthys)	347
tectulus (Platycarpus)	471	terrestris (Emys).....	448
tectum (Scapherpeton).....	424	terrestris (Hippopotamus).....	628
Tegeolepis.....	368	terrestris (Palæotheca).....	448
tehuanus (Cosoryx).....	683	terrestris (Tapirus).....	628
tehuanus (Dicrocerus).....	683	testis (Coryphodon).....	700
tehuanus (Merycodus).....	683	testis (Dapedoglossus)	393
Telacodon.....	566	testis (Metalophodon).....	700
Teleoceras.....	646, 647	testis (Phareodus).....	393
Teleoceratinae.....	646	testudinaria (Priscacara).....	402
Teleodus.....	638	Testudinata.....	434, 436, 449
Teleopternus.....	680	Testudinea.....	449
Teleostei.....	338, 357	testudinea (Emys).....	448
Teleostomi.....	338, 356	testudinea (Notomorphia)	448
telleri (Phlyctenacanthus)	332	Testudines.....	434
Telmalestes.....	793	testudineus (Otocelus).....	430
Telmatherium.....	631, 632	Testudinidae.....	447, 449
Telmatoeyon.....	755	Testudinina.....	449
Telmatolestes.....	793	Testudo.....	450, 451
Telmatornis.....	528	Tetheodus.....	389
Telmatotherium.....	631, 632	Tetheopsis.....	703, 705
temerarius (Canis).....	776	Tetrabelodon.....	707, 710, 711, 712
Temnoeyon.....	773	Tetracaulodon.....	707, 708, 709, 710, 712
temnodon (Cynodictis)	711	Tetracænodon.....	603
Temnospondyli.....	417	tetracus (Enchodus).....	389
temporalis (Merycochoerus).....	668	tetractylus (Ornithichnites)	551
tenax (Dryolestes).....	569	tetractylus (Ornithoidichnites)	551
tenebrosus (Crocodilus)	515	tetractylus (Sillimanianus).....	551
tenebrosus (Holops).....	515	tetradelta (Arvicola).....	729
tenebrosus (Notharctus).....	789	tetradelta (Pitymys).....	729
tenebrosus (Thoracosaurus).....	515	tetracus (Enchodus).....	389
tenellus (Asteroptychius).....	330	Tetragonolepis.....	376
tener (Ichthyornis).....	520	tetragonus (Mylohyus).....	660
Teniodus.....	288, 292	tetragonus (Tayassu).....	660
tenuiceps (Eurynotus).....	376	Tetralophodon.....	707, 710, 711
tenuiceps (Ischypterus).....	376	Tetraonidae.....	534
tenuiceps (Semionotus).....	376	Tetrodontina.....	408
tenuicorne (Ceraterpeton)	414	texana (Lamna).....	303
tenuicorne (Keraterpeton).....	414	texanus (Anchippus).....	613, 615
tenuicostatus (Hybocladodus)	271	texanus (Ancistrodon)	408

	Page.		Page.
texasus (Grypodon).....	408	Tinohyus.....	657
texensis (Diaceranodus).....	265	Tinosaurus.....	476
texensis (Didymodus).....	265	tisonensis (Onychodectes).....	573
texensis (Pleuracanthus).....	265	Titanichthys.....	348
texianus (Elephas).....	715	Titanophis.....	478
textilis (Nodosaurus).....	497	Titanops.....	634, 635
textilis (Sagenodus).....	355	Titanosaurus.....	484
therodactylum (Spheropezium).....	552	Titanotheriidae.....	629
therodactylus (Spheropezopus).....	552	Titanotheriinae.....	633
Thalassemydidae.....	440	Titanotherium.....	613, 633, 634, 635, 637, 638, 704
thaumas (Portheus).....	384	Titanotheroidea.....	629
thaumas (Xiphactinus).....	384	toliapicus (Carcharodon).....	307
thaumus (Saurocephalus).....	384	Tomarectus.....	775
Thecachampsu.....	512, 513, 515	Tomiopsis.....	581
Thecodontia.....	509	Tomitherium.....	744, 788, 789, 790
Thecodontosaurus.....	492	Tomodon.....	453
Thecophora.....	436	Tomodus.....	291
Theracopos.....	542, 552	Tomolabis.....	621, 623
Theriodontia.....	430	Tomomys.....	730
theristocaulodon (Missourium).....	709	Torosaurus.....	499
Theromora.....	426, 430	torquatus (Dicotyles).....	659
Theromorpha.....	426	torquatus (Sus).....	659
Theropleura.....	433	torus (Symborodon).....	637
Theropoda.....	487	tortor (Clidastes).....	467
Thespesius.....	502, 503	tortor (Edestosaurus).....	467
theta (Clupea).....	391	torulus (Megalonyx).....	578
theta (Diplomysus).....	381	tortus (Arcionys).....	720
Thinoeyon.....	761	tortus (Eucastor).....	722
Thinohyus.....	657	tortus (Castor).....	722
Thinolestes.....	794	tortus (Oricardinus).....	388
Thinopus.....	552	tortus (Stereodectes).....	720
Thinosaurus.....	476	torvum (Titanotherium).....	637
Thinotherium.....	650, 661	torvus (Menodus).....	637
Thleodon.....	565	torvus (Symborodon).....	637
Thleodontidae.....	564	Totanides.....	526
thomasii (Plastomenus).....	453	Toxaspis.....	449
thomasii (Trionyx).....	553	Toxichnus.....	553
Thomomys.....	730	Toxocheilyda.....	442
thooides (Cynodesmus).....	773	Toxocheyls.....	442
Thoracodus.....	277	Toxymys.....	724
Thoracosaurus.....	515, 516	Trachemys.....	449
Thoracosuchus.....	515	Trachodon.....	503, 504
Thrinacodus.....	266	Trachodontidae.....	503
Thryptodus.....	393	trachops (Choneziphius).....	597
Thyestes.....	339, 340	Trachosteus.....	348
Thyrsideum.....	416	trachyrhynchus (Pelecanus).....	532
tichoceras (Brontotherium).....	635	trachyspondylus (Zeuglodon).....	587
tichoceras (Menodus).....	635	Tragulidae.....	681
tichoceras (Titanotherium).....	635	Tragulina.....	681
Ticholeptus.....	669	Traguloida.....	681
Tichosteus.....	493	transmontanus (Miolabis).....	676
tiedemani (Squalodon).....	589	transmontanus (Protolabis).....	676
tiedmanni (Squalodon).....	589	transversa (Janassa).....	276
tigrina (Patriofelis).....	757	transversalis (Myliobatis).....	320
tigrinus (Protopsalis).....	757	transversus (Hypertragulus).....	675
Tillodonta.....	572	ransversus (Lambdodus).....	271
Tillodontia.....	572, 715	transversus (Paradaphænus).....	772
Tillomys.....	724	transversus (Peltodus).....	276
Tillotheriidae.....	716	Tremaretos.....	763
Tillotherium.....	716, 717	Tremataspidae.....	740
Tinoceras.....	702, 703, 704, 706	tremontigerus (Cænobasiliscus).....	708
Tinoceratidae.....	701	Tretosphys.....	591, 592
Tinoceridae.....	701	Tretulias.....	600
Tinodon.....	567, 568	Triacodon.....	751, 752, 753
Tinodontidae.....	567	Triacranodus.....	265
Tinodontinae.....	567	Trienaspis.....	397

	Page.		Page.
Trienopus.....	553	Trimerorhachidæ.....	419
triangularis (Asteroptychius).....	330	Trimerorhachis.....	420
triangularis (Carcharodon).....	308	Trinacnomerum.....	458
triangulata (Theropleura).....	433	Trionychia.....	452
triangulus (Ctenacanthus).....	328	Trionychida.....	453
tribulis (Chitinodus).....	293	Trionychidæ.....	453
tricarinatus (Lysorophus).....	433	Trionychides.....	452
Tricentes.....	746	Trionychoidæ.....	452
Triceratops.....	498, 499	trionychoides (Anosteira).....	453
trichænus (Bothrolabis).....	658	trionychoides (Plastomenus).....	453
trichænus (Thrinichys).....	658	Trionyx.....	452, 453, 454, 455
Trichechidæ.....	583, 783	tripartitus (Edaphodon).....	325
Trichechina.....	783	tripartitus (Ischyodus).....	325
Trichechini.....	784	triplex (Palæolagus).....	736
Trichechus.....	583, 584, 784	triplex (Xiphopeza).....	553
Trichiuridæ.....	403	Triploidiæ.....	639
Trichiurus.....	403	Triplopodidæ.....	639
Trichophanes.....	404	Triplopodinae.....	639
Tricium.....	735, 736	Triplopus.....	640
Triconodon.....	567	tripos (Hadrosaurus).....	504
Triconodonta.....	566	tripos (Trachodon).....	504
Triconodontidæ.....	566	Tripriodon.....	560, 561
Triconodontinae.....	566	Tripriodontidæ.....	558
tricostatus (Hypertargulus).....	674	Trispondylus.....	604, 605
tricuspidatus (Fissodus).....	277	Tristychius.....	336
tricuspis (Didelphis).....	571	trisulcatus (Synthetodus).....	356
tricuspis (Didelphys).....	571	Trogosus.....	716, 717
tricuspis (Herpetotherium).....	571	trogontheri (Elephas).....	713
tricuspis (Peratherium).....	571	Trogothierium.....	733
tridactylum (Aceratherium).....	643	Troödon.....	490
tridactylus (Cænopus).....	643	tropieum (Mammut).....	712
Tridentipes.....	551, 552	tropicus (Dibelodon).....	712
trifidus (Hylopus).....	546	tropicus (Mastodon).....	712
trifrons (Agriochærus).....	664	trouessartianus (Ptilodus).....	559
trigonalis (Oracanthus).....	335	Trucifelis.....	780
trigonalis (Puigcaccanthus).....	335	truquianum (Aceratherium).....	644
trigonata (Lamnia).....	305	truquatus (Chriacus).....	715
trigonatus (Otodus).....	305	truncatus (Polyrhizodus).....	283
Trigonias.....	642	truquianum (Aceratherium).....	644
trigonocephalus (Eporeodon).....	667	truquianum (Diceratherium).....	644
trigonocephalus (Eucretaphus).....	667	truquianus (Rhinoceros).....	644
trigonoceras (Menodus).....	637	truxalis (Calamagras).....	480
trigonoceras (Symborodon).....	636, 637	Trygon.....	319
trigonoceras (Titanotherium).....	637	Trygones.....	318, 319
trigonodon (Oxyrhina).....	306	Trygonidæ.....	318
trigonodum (Aceratherium).....	643	Trygoninae.....	319
trigonodum (Leptacatherium).....	643	tuberatum (Brontozoum).....	544
trigonodus (Rhinoceros).....	643	tuberatus (Eubrontes).....	544
Trigonodus.....	288, 289, 292	tuberculata (Eurylepis).....	366
Trigonolestes.....	648, 649	tuberculata (Haplolepis).....	366
Trigonolestoidæ.....	648	tuberculata (Mecolepis).....	366
Trihamus.....	553	tuberculatus (Bottosaurus).....	514
trihedron (Dryptosaurus).....	488	tuberculatus (Dinichthys).....	347
trihedron (Lælaps).....	488	tuberculatus (Holoptychius).....	359
trihedrus (Chorhynchus).....	500	tuberculatus (Orodus).....	296
Triisodon.....	747, 748	tuberculatus (Ponerichthys).....	347
Triisodontidæ.....	747	tuberculatus (Pontobasileus).....	588
trilateralis (Cosoryx).....	683	tuberosa (Protostege).....	440
trilateralis (Dicrocerus).....	683	tuberosus (Atlantochelys).....	440
trilateralis (Merycodus).....	683	tuberosus (Eubrontes).....	544
trilobatus (Phenacodus).....	604	tuberosus (Neptunochelys).....	440
trilobus (Deltodus).....	293	tuberosus (Ornithichnites).....	543, 544
Trilophodon.....	707, 708, 710	tubersus (Ornithoidichnites).....	544
trilophus (Adjidaumo).....	720	tuberosus (Platecarpus).....	440
trilophus (Gymnoptychus).....	720	tubifer (Aceratherium).....	640
Trimerodus.....	671	tubifer (Anchisodon).....	640

Page.	Page.
Tubinares	523, 526
Tuditanidæ	415
Tuditanus	415
tumidus (Cladodus)	970
tumidus (Desmiodus)	297
tumidus (Psammodus)	285
tumidus (Stagodon)	565
tumidus (Stethacanthus)	333
tumula (Oxyrhina)	307
tumulus (Isurus)	307
turgida (Emsy)	445
turgida (Testudo)	452
turgidunculus (Miocænus)	606
turgidunculus (Protagonodon)	606
turgidus (Agomphus)	445
turgidus (Amphiemys)	445
turgidus (Carcharodon)	307
turgidus (Miocænus)	606
turgidus (Orodus)	296
turgidus (Palæolagus)	736
turgidus (Psammodus)	285
turneri (Leuciscus)	396
turritus (Cladodus)	269, 270
Turseodus	369
tursio (Physeter)	595
tutum (Tomtherium)	790
tutus (Polycodus)	790
Tylopoda	662
Tylosauridæ	471
Tylosaurinæ	471
Tylosaurus	471
Tylosteus	477
tympaniticus (Platecarpus)	440, 469
Tympanuchus	534
Typodus	372
Typopus	553
Typosuchia	511
Typothorax	511
typus (Bathrodon)	798
typus (Gampsacanthus)	336
typus (Glyptodon)	581
typus (Ischyromys)	725
tyrannus (Delphinapterus)	599
tyrannus (Limnotherium)	789
tyrannus (Notharctus)	789
tyrannus (Tomtherium)	789
tysonii (Zarachis)	592
U.	
uddeni (Dipterus)	352
uddeni (Gampbacanthus)	332
uddeni (Heteracanthus)	332
uinchellianus (Ptyonius)	415
Uintacyon	759
Uintacyonidæ	759
uintaensis (Amia)	381
uintaensis (Protamia)	381
uintaensis (Trionyx)	454
Uintamastix	701, 702
uintanum (Orotherium)	612
uintanus (Orohippus)	612
uintanus (Pachynolophus)	612
Uintatheridæ	701
Uintatherium	700, 701, 702, 703, 704, 705, 706
uintense (Elotherium)	654
uintense (Protelotherium)	654
uintensis (Achænodon)	654
uintensis (Epihippus)	612
uintensis (Miæcis)	760
uintensis (Mesonyx)	750
uintensis (Microsops)	791
uintensis (Orohippus)	612
uintensis (Paramys)	724
uintensis (Prodaphænus)	760
uintensis (Sphenocælus)	691
Uinternis	536
Ulias	599
ulta (Patriofelis)	757, 758
ultimum (Anchitherium)	614
ultimus (Mesohippus)	614
ultimus (Miohippus)	614
ultimus (Palæosyops)	631
umbonatus (Otolithus)	409
umbrosus (Cathartes)	535
umbrosus (Ornithochirus)	508
umbrosus (Palæoborus)	535
umbrosus (Pteranodon)	508
umbrosus (Pterodactylus)	508
umbrosus (Vultur)	535
Uncia	778, 782, 783
uncinatus (Cottus)	407
uncus (Gryphodobatis)	316
uncus (Tridentipes)	552
undans (Paramys)	724
undans (Plesiarcotomys)	724
undans (Sciuravus)	724
undans (Tanyops)	628
undata (Bæna)	438
undata (Testudo)	451, 452
undatum (Chisternon)	438
undulatus (Deltodus)	293
undulatus (Helodus)	287
unguiculus (Lecracanthus)	336
unguifer (Palæosauropus)	548
unguifer (Sauropus)	548
unguiformis (Janassa)	276
unguiformis (Peltodus)	276
Ungulata	601
ungulatus (Hypsirophus)	496
ungulatus (Stegosaurus)	496
uniformis (Theropleura)	433
unios (Ceratoptera)	322
unios (Manta)	322
unipedale (Diacium)	477
unipedalis (Crematosaurus)	477
unipedalis (Platyrrhachis)	477
uræus (Priscodelphinus)	592
uræus (Tretosphys)	592
Uranoplosus	373
Uria	524
Urocordylidæ	414
Urocordylus	414
Urocyon	775
Urodela	424
Uronantes	457
Ursidæ	762
ursidens (Anæcodon)	747
Ursini	762
ursinus (Ælurodon)	774
ursinus (Amphicyon)	774
ursinus (Canis)	774
Ursus	763

		Page.		Page.
V.				
vabasensis (Ctenodus)	355	variabilis (Lophodus)	296	
vabasensis (Sagenodus)	355	variabilis (Orodus)	296, 327	
vaccinsulensis (Champsosaurus)	461	variabilis (Venustodus)	287	
vachsmuthi (Cladodus)	270	varians (Menodus)	637	
vafer (Canis)	776	varians (Menops)	637	
vafer (Vulpes)	776	varians (Titanotherium)	549	
vagus (Homacodon)	650	varica (Platypterna)	295, 296	
vagus (Loxolophodon)	505	varicostatus (Orodus)	445	
vagus (Macclognathus)	475	variolosus (Basilemys)	445	
vagus (Oreosaurus)	527	variolosus (Compsenys)	329	
vagus (Paleotringa)	650	varius (Ctenacanthus)	399	
vagus (Pantolestes)	654	varius (Pelecorapis)	280	
vagus (Parahyus)	705	varsonviensis (Chomatodus)	294	
vagus (Tinoceras)	454	varsoviensis (Deltortychius)	294	
vagus (Trionyx)	705	varsoviensis (Pœcilodus)	609, 610	
vagus (Urtatherium)	475	vasacciense (Hyracotherium)	610	
vagus (Xestops)	390	vasacciense (Orotherium)	610	
vagrans (Cyclostomodon)	661	vasacciensis (Eolippus)	610	
vagrans (Sus)	547	vasacciensis (Notharctus)	610	
vagus (Limnopus)	794	vasacciensis (Orohippus)	290	
vagus (Palæacodon)	654	vasachiensis (Notharctus)	492	
vagus (Parahyus)	652	Vaticinodus	516	
valens (Anthracotherium)	490	veatleianus (Clepsysaurus)	516	
valens (Antrodemus)	490	vebbianus (Goniopholis)	516	
valens (Megalosaurus)	652	vebbianus (Hyposaurus)	516	
valens (Octacodon)	569	vebbii (Diplosaurus)	516	
valens (Paurodon)	490	vebbii (Goniopholis)	516	
valens (Pœcilopleuron)	490	vebbii (Hyposaurus)	513	
valens (Poecilopleuron)	490	veelerii (Crocodilus)	433	
valens (Rhachitonus)	422	vellicatus (Archæobelus)	467, 468	
validum (Brontozoum)	544	velox (Clidastes)	468	
validum (Hyracotherium)	610	velox (Edestosaurus)	533	
validum (Telmatherium)	632	velox (Graculavus)	742	
validum (Telmatotherium)	632	velox (Nyetitherium)	494	
validum (Thinotherium)	650	vel. x (Ornithomimus)	388	
validus (Belodon)	510	velox (Pachyrhizodus)	508	
validus (Brontops)	634	velox (Pteranodon)	508	
validus (Clidastes)	467	velox (Pterodactylus)	767	
validus (Eohippus)	610	velox (Thinocyon)	599	
validus (Helohyus)	520	velox (Zarhachis)	70	
validus (Ichthyornis)	467, 473	ventanus (Coryphodon)	609, 61	
validus (Liodon)	628	venticolum (Hyracotherium)	61	
validus (Lophiodon)	467	venticolus (Protorohippus)	62	
validus (Macrosaurus)	378	ventorum (Heptodon)	62	
validus (Megalonyx)	467, 473	ventorum (Lophiodon)	62	
validus (Nectoporthes)	650	ventorum (Pachynolophus)	62	
validus (Phenacodus)	510	ventricosus (Trionyx)	28	
validus (Phytosaurus)	628	Venustodus	6	
validus (Protapirus)	565	venustum (Hipparion)	6	
validus (Stagodon)	569	venustum (Hippotherium)	6	
validus (Stylacodon)	628	venustus (Aletornis)	5	
validus (Tapiravus)	632	venustus (Antiacodon)	7	
vallidens (Manteoceras)	632	venustus (Chomatodus)	2	
vallidens (Palæosyops)	632	venustus (Delphinodon)	5	
vallidens (Telmatherium)	632	venustus (Erethizon)	7	
vallidens (Telmatotherium)	270	venustus (Hystriacops)	7	
vanhornei (Cladodus)	331	venustus (Hystrix)	7	
vanhornei (Bythiacanthus)	294	venustus (Laodon)	1	
vanhornii (Cochliodus)	285	venustus (Phocageneus)		
vanhornii (Copodus)	476	venustus (Sarcolemur)		
Varani	476	venustus (Venustodus)		
Varanidae	350	vera (Sinopa)		
variable (Mylostoma)	296	Vermilingua		
variabilis (Agassizodus)	296	vermontana (Beluga)		
variabilis (Campodus)		vermontana (Delphinapterus)		
		vermontanus (Delphinus)		

	Page.
verrucosa (Glyptaspis)	349
verticalis (Carcharias)	302
verticalis (Lamna)	302
verticalis (Odontaspis)	302
verus (Carcharias)	308
verus (Limnoceyon)	752
verus (Palæacodon)	794
verus (Platyxystrodon)	290
verus (Stypolophus)	752
verus (Xystrodon)	290
Vesperimus	726
Vesperomys	727
Vespertilio	742
Vespertilionidae	742
Vesperugo	742
Vesperus	742
veterrima (Palæosinopa)	754
vetulus (Anchippodus)	717
vetulus (Trogosus)	717
vetus (Amphicyon)	722
vetus (Arctiomys)	720
vetus (Catodon)	595
vetus (Daphænus)	772
vetus (Daphænus)	772
vetus (Diodon)	408
vetus (Heliscomys)	729
vetus (Limnoceyon)	752
vetus (Lobodon)	785
vetus (Miacis)	752
vetus (Ogmorhinus)	785
vetus (Palæotringa)	527
vetus (Physeter)	595
vetus (Platygonus)	661
vetus (Polygonodon)	478
vetus (Stenorhynchus)	785
vetustus (Apatacanthus)	331
vetustus (Asteroptychius)	330
vetustus (Cimoliasaurus)	459
vetustus (Ctenacanthus)	328
vetustus (Discosaurus)	459
vetustus (Oracanthus)	335
vetustus (Pristacanthus)	331
vetustus (Sandalodus)	290
vetustus (Tamiobatis)	315
vetustus (Vaticinodus)	290
viæmalæ (Dystrophæus)	497
vicarius (Hyopsodus)	790
vicarius (Microsops)	791
vicomicanus (Myliobatis)	791
victor (Dicrocyonodon)	568
victor (Diplocynodon)	568
victor (Hallopus)	494
victor (Ichthyornis)	520
victor (Nanosaurus)	494
victus (Compsemys)	437
villosus (Mallotus)	392
vilsoni (Poebrotherium)	676
vinchellianus (Ptyonius)	415
vinearius (Graphiodon)	590
vinearius (Squalodon)	590
vinosus (Ctenopetalus)	281
vinosus (Ctenoptychius)	281
vinslovii (Ceratodus)	358
vinslovii (Clepsydrops)	432
vinslovii (Ptyonodus)	358
vinslovii (Sagenodus)	358

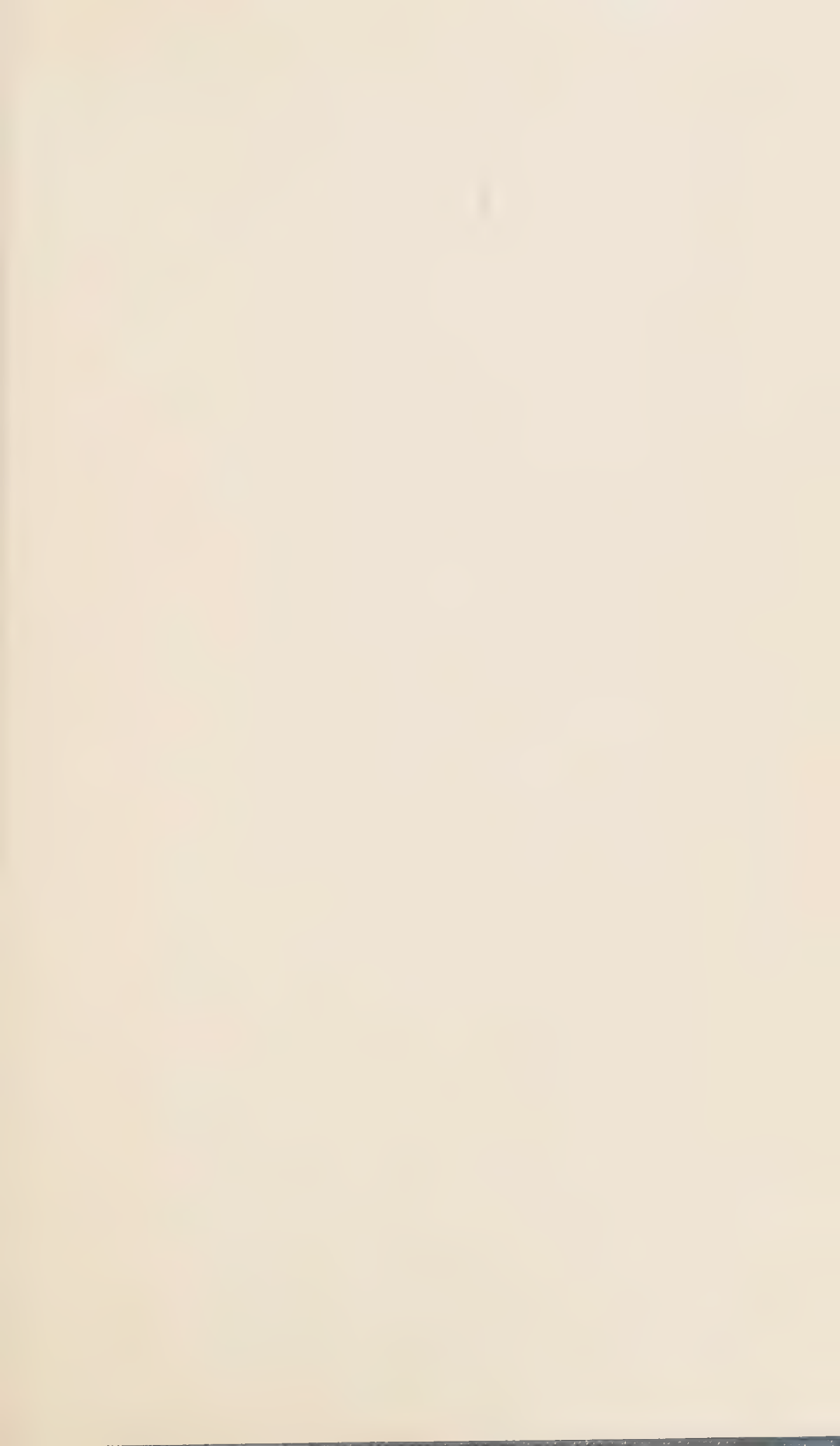
	Page.
vintanum (Orotherium).....	609
vintanus (Pliolophus).....	609, 612
virginiana (Dama).....	684
virginiana (Didelphis).....	571
virginiana (Didelphys).....	571
virginianus (Agassizodus).....	297
virginianus (Bubo).....	536
virginianus (Campodius).....	297
virginianus (Canis).....	775
virginianus (Cariacus).....	684
virginianus (Cervus).....	684
virginianus (Odobenus).....	784
virginianus (Orodus).....	297
virginianus (Trichechus).....	784
virginianus (Trionyx).....	455
virginiensis (Procamelus).....	678
virginiensis (Procamelus).....	678
virgulatus (Trienaspis).....	397
viridensis (Asineops).....	104
vison (Putorius).....	768
vitakeriana (Auchenia).....	679
vitakerianus (Camelops).....	679
vitakerianus (Holomeniscus).....	679
Viverravide.....	754
Viverravus.....	754, 755, 761
viverrina (Sinopa).....	753
viverrinus (Prototomus).....	753
viverrinus (Stypolophus).....	753
vorax (Didelphodon).....	566
vorax (Didelphops).....	566
vorax (Dromocyon).....	751
vorax (Dryolestes).....	576
vorax (Edestus).....	337
vorax (Mesonyx).....	751
vorax (Miacid).....	760
vorax (Uintacyon).....	760
vortmani (Hyracotherium).....	604
vortmani (Phenacodus).....	603, 605
vortmani (Sciurus).....	719
vulcanorum (Plianchenia).....	680
vulgaris (Macropterna).....	548
Vulpavus.....	761
Vulpes.....	775
yulpiceps (Procyonictis).....	760
yulpinus (Amphicyon).....	760
yulpinus (Harpalodon).....	761
yulpinus (Miacid).....	760
yulpinus (Uintacyon).....	760
yultuosus (Hemiganus).....	574
Vultur.....	535
vymanii (Clidastes).....	468
vyomingensis (Adocus).....	445
vyomingensis (Baptemys).....	445
vyomingensis (Dermatemys).....	445
vyomingensis (Emys).....	448

W.

wachsmuthi (Cladodus).....	270
wachsmuthi (Deltptychius).....	294
wagneri (Ctenodus).....	353
wallovianus (Temnocyon).....	773
warreni (Cervus).....	683
warreni (Periplectroodus).....	287
Washakius.....	787, 792
westii (Clidastes).....	468

W.









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